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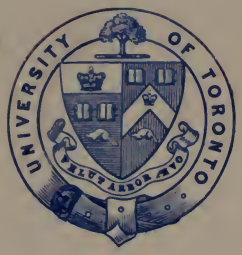
The Modern Distributive Process.

Clark and Giddings.



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THE

MODERN DISTRIBUTIVE PROCESS.

STUDIES OF COMPETITION AND ITS LIMITS, OF THE NATURE AND AMOUNT OF PROFITS, AND OF THE DETERMINATION OF WAGES, IN THE INDUSTRIAL SOCIETY OF TO-DAY

BY

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AND

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PREFACE.

A SYSTEMATIC restatement of the facts and laws of the Distribution of Wealth is not attempted in these studies. Nothing is said in them, except incidentally, of interest and rent. They are studies of the process by which the income of modern society is divided among its principal claimants. There is presented to the student of to-day a more highly organized industrial system, and a more complicated process of apportioning the social income, than those that were observed by Adam Smith, David Ricardo, and John Stuart Mill. By the operations of trade the total product of industry is divided and subdivided among certain naturally constituted groups and sub-groups. The income falling to each sub-group is apportioned among its component economic classes, capitalists, laborers, etc., by the bargains that they make with each other. In each of these dividing acts, artificial combinations, — the pools, trusts, labor unions, etc., of recent times, — have come to play a part so prominent that competition would seem, at the first view, to be abolished at important points. The mode of its working has been, in fact, so changed as to demand a new scientific treatment.

It is the aim of these studies to analyze the natural group system of modern industry; to determine where within it competition is possible, and where combination is naturally invited; to ascertain the extent to which this movement checks individual rivalry; and to determine the nature and scope of that residual competition which is the controlling principle of the new regime. They thus undertake to separate that which is transient from that which is permanent in the Ricardian Theory of Distribution.

They analyze into its elements the sum traditionally termed profits, and show that an essential element, the only part of the gross sum to which the term pure profit can be applied, has not been clearly distinguished by the traditional analysis, and that, as a matter of course, the special laws that determine its amount have not been established. They show that the tendency of modern competition is to sweep this

pure profit out of existence, while that of other forces is to cause it continually to reappear. The view of social evolution which these conclusions afford is that of a progress toward equity between men promoted by combinations, but guaranteed by the deeper and more general influence of competition itself. Injustice is diminishing, and that by natural law. These studies, however, take especially into account the ethical consciousness of society, which not only sets up an ideal toward which society should tend, but, by public opinion, by legislation, and in many subtle but effective ways promotes the natural movement in that direction.

The complementary character of these essays by two writers is not a premeditated result of joint authorship. The joint authorship was agreed upon, because it was discovered that, working independently, the writers had arrived at complementary conclusions. The essays were originally published in the *Political Science Quarterly*, and are now republished by the kind permission of the editors of that review.

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THE LIMITS OF COMPETITION.

THERE is a sense in which much of the orthodox system of political economy is eternally true. Conclusions reached by valid reasoning are always as true as the hypotheses from which they are deduced. If we admit the fact of unlimited competition, we concede in advance many doctrines which current opinion is now disposed to reject. This refuge will always be open to the latter-day defenders of the faith, as they are confronted by greater and greater discrepancies between their system and the facts of life; it will remain forever true that if unlimited competition existed, most of the traditional laws would be realized in the practical world. It will also be true that in those corners of the industrial field which still show an approximation to Ricardian competition there will be seen as much of correspondence between theory and fact as candid reasoners claim. If political economy will but content itself with this kind of truth, it need never be disturbed by industrial revolutions. The science need not trouble itself to progress.

This hypothetical truth, or science of what would take place if society were fashioned after an ideal pattern, is not what Ricardo believed that he had discovered. His system was positive; actual life suggested it by developing tendencies for which the scientific formulas which at that time were traditional could not account. It was a new industrial world which called for a modernized system of economic doctrine. Ricardo was the first to understand the situation, to trace the new tendencies to their consummation, and to create a scientific system by insight and foresight. He outran history in the process, and mentally created a world more relentlessly competitive than any which has existed; and yet it was fact and not imagination that lay at the basis of the whole system. Steam had been utilized, machines were supplanting hand labor, workmen were migrating to new centres of production, guild regulations were giving way,

and competition of a type unheard of before was beginning to prevail.

A struggle for existence had commenced between parties of unequal strength. In manufacturing industries the balance of power had been disturbed by steam, and the little shops of former times were disappearing. The science adapted to such conditions was an economic Darwinism; it embodied the laws of a struggle for existence between competitors of the new and predatory type and those of the peaceable type which formerly possessed the field. Though the process was savage, the outlook which it afforded was not wholly evil. The survival of crude strength was, in the long run, desirable. Machines and factories meant, to every social class, cheapened goods and more comfortable living. Efficient working establishments were developing; the social organism was perfecting itself for its contest with crude nature. It was a fuller and speedier dominion over the earth which was to result from the concentration of human energy now termed centralization.

The error unavoidable to the theorists of the time lay in basing a scientific system on the facts afforded by a state of revolution. This was attempting to derive permanent principles from transient phenomena. Some of these principles must become obsolete; and the work demanded of modern economists consists in separating the transient from the permanent in the Ricardian system. How much of the doctrine holds true when the struggle between unequal competitors is over, and when a few of the very strongest have possession of the field? Can the old-time competition be trusted to divide the fruits of industry between one overgrown shop and another, and between the owners and the workmen in each? Can this same force control railroads, as it once controlled stage-coaches and packet-sloops? To be more accurate, are the transactions of consolidated railroad lines governed by the same principles as those of single railroads and stage-coach lines when these are competing with each other? Does the old regulating principle at present exist, and will general well-being continue to evolve itself under its unaided influence? An economic system

adapted to the modern era must begin by answering these questions.

In most branches of manufacturing, and in other than local transportation, the contest between the strong and the weak is either settled or in process of rapid settlement. The survivors are becoming so few, so powerful, and so nearly equal that if the strife were to continue, it would bid fair to involve them all in a common ruin. What has actually developed is not such a battle of giants, but a system of armed neutralities and federations of giants. The new era is distinctively one of consolidated forces; rival establishments are forming combinations, and the principle of union is extending itself to the labor and the capital in each of them. Laborers, who once competed with each other, are now making their bargains collectively with their employers. Employers, who under the old *régime* would have worked independently, are merging their capital in corporations, and allowing it to be managed as by a single hand. We need Ricardo's insight and foresight if we are to attain the economic laws that are to govern the transactions of the practical world. The changes which we are witnessing are as startling in character as those which he witnessed, and are on a scale of greater magnitude. There is this difference between his scientific position and ours, namely, that he saw before him an interval of contest that must of necessity, sooner or later, come to an end; while we see approaching a period of union which gives a promise of indefinite continuance. He studied the evolution that created a type of industrial establishment; we have to study the functions of this surviving type. History will aid us by furnishing a point of departure, and by indicating the direction of social development, but not by giving facts from which any possible induction can give the principles which we seek. The light derivable from past facts is negative; that derivable from present tendencies is positive. The materials for study lie in the present and the immediate future; and, to be scientific, we must be somewhat prophetic.

Predatory competition between unequal parties was the basis of the Ricardian system. This process was vaguely conceived

and never fully analyzed; what was prominent in the thought of men in connection with it was the single element of struggle. Mere effort to survive, the Darwinian feature of the process, was all that, in some uses, the term competition was made to designate. Yet the competitive action of an organized society is systematic; each part of it is limited to a specific field, and tends, within these limits, to self-annihilation.

An effort to attain a conception of competition that should remove some of the confusion was made by Professor Cairnes. His system of "non-competing groups" is a feature of his value theory, which is a noteworthy contribution to economic thought. Mr. Mill had followed Ricardo in teaching that the natural price of commodities is governed by the cost of producing them. Professor Cairnes accepts this statement, but attaches to it a meaning altogether new. He says, in effect:

> Commodities do indeed exchange according to their cost of production; but cost is something quite different from what currently passes by that name. That is merely the outlay incurred by the capitalist-employer, for raw materials, labor, *etc.* The real cost is the personal sacrifice made by the producing parties, workmen as well as employers. It is not a mercantile but a psychological phenomenon, a reaction upon the men themselves occasioned by the effort of the laborer and the abstinence of the capitalist. These personal sacrifices gauge the market value of commodities within the fields in which, in the terms of the theory, competition is free. The adjustment takes place through the spontaneous movement of capital and labor from employments that yield small returns to those that give larger ones. Capital migrates freely from place to place and from occupation to occupation. If one industry is abnormally profitable, capital seeks it, increases and cheapens its product, and reduces its profits to the prevailing level. Profits tend to a general uniformity.

Wages are said to tend to equality only within limits. The transfer of labor from one employment to another is checked by barriers.

> What we find, in effect [continues Professor Cairnes], is not a whole population competing indiscriminately for all occupations, but a series of industrial layers, superimposed on one another, within each of which the various candidates for employment possess a real and effective power of

selection, while those occupying the several strata are, for all purposes of effective competition, practically isolated from each other. We may perhaps venture to arrange them in some such order as this: first, at the bottom of the scale there would be the large group of unskilled or nearly unskilled laborers, comprising agricultural laborers, laborers engaged in miscellaneous occupations in towns, or acting in attendance on skilled labor. Secondly, there would be the artisan group, comprising skilled laborers of the secondary order, — carpenters, joiners, smiths, masons, shoemakers, tailors, hatters, *etc.*, *etc.*, — with whom might be included the very large class of small retail dealers, whose means and position place them within the reach of the same industrial opportunities as the class of artisans. The third layer would contain producers and dealers of a higher order, whose work would demand qualifications only obtainable by persons of substantial means and fair educational opportunities; for example, civil and mechanical engineers, chemists, opticians, watchmakers, and others of the same industrial grade, in which might also find a place the superior class of retail tradesmen; while above these there would be a fourth, comprising persons still more favorably circumstanced, whose ampler means would give them a still wider choice. This last group would contain members of the learned professions, as well as persons engaged in the various careers of science and art, and in the higher branches of mercantile business.

It is essential to the theory that not only workmen but their children should be confined to a producing group. The equalizing process may take place even though men do not actually abandon one occupation and enter another; for there exists, in the generation of young men not yet committed to any occupation, a disposable fund of labor, which will gravitate naturally to the occupations that pay the largest wages. It is not necessary that blacksmiths should ever become shoemakers, or *vice versa*, but only that the children of both classes of artisans should be free to enter the trade that is best rewarded.

Professor Cairnes does not claim that his classification is exhaustive, nor that the demarcation is absolute:

> No doubt the various ranks and classes fade into each other by imperceptible gradations, and individuals from all classes are constantly passing up or dropping down; but while this is so, it is nevertheless true that the average workman, from whatever rank he be taken, finds his power of competition limited for practical purposes to a certain range of

occupations, so that, however high the rates of remuneration in those which lie beyond may rise, he is excluded from sharing them. We are thus compelled to recognize the existence of non-competing industrial groups as a feature of our social economy.

It will be seen that the competition which is here under discussion is of an extraordinary kind; and the fact that the general term is applied to it without explanation is a proof of the vagueness of the conceptions of competition with which acute writers have contented themselves. Actual competition consists invariably in an effort to undersell a rival producer. A carpenter competes with a carpenter because he creates a similar utility, and offers it in the market. In the theory of Professor Cairnes the carpenter is the competitor of the blacksmith, because his children may enter the blacksmith's calling. In the actual practice of his own trade, the one artisan in nowise affects the other. It is potential competition rather than actual that is here under discussion; and even this depends for its effectiveness on the action of the rising generation.

Cost, in the sense of personal sacrifice, governing prices within the fields in which potential competition exists, is the summary of this noteworthy theory. The criticism to be made upon it is that the application of its more fundamental principle, that which connects the prices of commodities with the sacrifices involved in producing them, is, in modern industry, far wider than the author of the theory supposed, and wider than it was, in fact, in European countries at the time when he published his work. The limitations which he imposed on the action of this principle are no longer necessary, and the fourfold grouping of laborers according to their personal qualities no longer corresponds with anything in actual life.

Modern methods of production have obliterated Professor Cairnes' dividing lines. Potential competition extends to every part of the industrial field in which men work in organized companies. Throwing out of account the professions, a few trades of the highest sort, and the class of labor which is performed by employers themselves and their salaried assistants, it is practically true that labor is in a universal ebb and flow; it

passes freely to occupations which are, for the time being, highly paid, and reduces their rewards to the general level.

This objection to the proposed grouping is not theoretical. The question is one of fact; it is the development of actual industry that has invalidated the theory which, ten years ago, expressed an important truth concerning economic relations in England. Moreover, the author of the theory anticipated one change which would somewhat lessen its applicability to future conditions. He recorded his belief that education would prove a leveller, and that it would merge to some extent the strata of industrial society. The children of hod-carriers might become machinists, accountants, or lawyers when they could acquire the needed education. He admitted also that new countries afford conditions in which the lines of demarcation are faint. He was not in a position to appreciate the chief levelling agency, namely, the machine method of production as now extended and perfected. Education makes the laborer capable of things relatively difficult, and machines render the processes which he needs to master relatively easy. The so-called unskilled workmen stand on a higher personal level than those of former times; and the new methods of manufacturing are reducing class after class to that level. Mechanical labor is resolving itself into processes so simple that any one may learn them. An old-time shoemaker could not become a watchmaker, and even his children would have found difficulties in their way had they attempted to master the higher trade; but a laster in a Lynn shoe factory can, if he will, learn one of the minute trades that are involved in the making of a Waltham watch. His children may do so without difficulty; and this is all that is necessary for maintaining the normal balance between the trades.

The largest surviving differences between workmen are moral. Bodily strength still counts for something, and mental strength for more; but the consideration which chiefly determines the value of a workman to the employer who entrusts to him costly materials and a delicate machine is the question of fidelity. Character is not monopolized by any social class; it

is of universal growth, and tends, by the prominent part which it plays in modern industry, to reduce to their lowest terms the class differences of the former era.

The rewards of professional life are gauged primarily by character and native endowment, and are, to this extent, open to the children of workmen. New barriers, however, arise here in the ampler education which, as time advances, is demanded of persons in these pursuits; and these barriers give to a part of the fourth and highest class in the scheme that we are criticising a permanent basis of existence. Another variety of labor retains a pre-eminence based on native adaptations and special opportunities. It is the work of the employer himself. It is an organizing and directing function, and in large industries is performed only in part by the owners. A portion of this work is committed to hired assistants. Strictly speaking, the *entrepreneur*, or employer, of a great establishment is not one man, but many, who work in a collective capacity, and who receive a reward that, taken in the aggregate, constitutes the "wages of superintendence." To some members of this administrative body the returns come in the form of salaries, while to others they come partly in the form of dividends; but if we regard their work in its entirety, and consider their wages in a single sum, we must class it with *entrepreneur's* profits rather than with ordinary wages. It is a different part of the product from the sum distributed among day-laborers; and this fact separates the administrative group from the class considered in our present inquiry. Positions of the higher sort are usually gained either through the possession of capital, or through relations to persons who possess it. Though clerkships of the lower grade demand no attainments which the children of workmen cannot gain, and though promotion to the higher grades is still open, the tendency of the time is to make the transition from the ranks of labor to those of administration more and more difficult. The true laboring class is merging its subdivisions, while it is separating more sharply from the class whose interests, in test questions, place them on the side of capital.

If we consider individuals of the higher group, we shall find that the grounds for classifying them separately from wage-workers are not always distinct. It may be doubtful whether a particular man should be rated as a workman, or as a subordinate member of the employer's staff. In the case of responsible managers this uncertainty disappears. The manager of a great manufactory does what is clearly identified as *entrepreneur's* work, and receives a reward which, in the minds of those who pay it, stands in a recognized ratio to the product which is secured by his efficiency. Such a man is identified with employers in interest, acts with them when labor conflicts arise, and carries with him the staff of assistants who help to execute his plans and, in some degree, share his fortunes. Here lies the essential distinction between salaried labor and the true wage-labor to which our inquiry is now confined.

America affords the conditions most favorable to the levelling process which is reducing the workman proper to a single social stratum. To this extent our democracy has an economic basis. Free education and native versatility elevate the lower substrata, while machine processes depress the higher. High general wages assist, by placing within the reach of the children of the state that modicum of training which opens many callings to their selection. The barriers that separated wage-earners into broad non-competing strata are, to all intents and purposes, things of the past.

Art may create barriers where nature has destroyed them. The concerted action of men may set in motion aristocratizing influences, where a natural evolution would lead to democracy. Trades unions may obstruct the transfer of labor from one occupation to another, and create a partial monopoly of favored employments. Restrictions on apprenticeships like those which prevailed among the mediæval guilds might, if carried far enough, erect a palisade around each of the minute trades which the factory system has developed, and substitute for the general strata of former times an artificial grouping far more undemocratic in its practical working. Labor organization has in fact taken this course, to an extent that produces appreciable effects

on relative wages. The boy who has both time and ability to learn a trade is not always permitted to do so; and hence arises the need of trade schools, especially in self-governing countries. It is an important question whether the principle of equality and consequent fraternity is to prevail over the artificial tendency to exclusiveness and antagonism. In the long run and in the general field it must prevail; the forces in its favor are too powerful to be resisted. The education which increases men's working ability, the change of method which makes less and less demands on that ability, supplemented by the public sentiment that revolts at the policy of denying to men the opportunity to do what they can for themselves and for society, will keep within bounds the effort to monopolize skill by reviving guild regulations. Trades unions may, for some time, interpose obstacles to the free transfer of labor to the points of greatest demand, which is the potential competition of Professor Cairnes' theory; but, in the long run, causes beyond arbitrary control will keep this movement nearly free.

It is not workmen but employers who have erected the chief artificial barriers against competition. A startling recent development is the system of combinations by which producers of particular articles have attempted arbitrarily to control the supply and the market value of their respective products. This apparently wholesale abrogation of economic law was unthought of by early economists; and although in Professor Cairnes' time the pooling process had begun, even he regarded capital as in a universal ebb and flow, ready to move spontaneously to the point where it could gain the largest returns. Toward the close of what we have termed the century of transition, producers' combinations appeared on a large scale; and very lately they have stolen a forced march upon economists. While we slept, as it were, and dreamed of the regulation of values by the automatic flow of capital to the points of highest profit, the principle apparently ceased to operate within very extensive fields. It would be easy to name a hundred staple articles, like glass, wall-paper, cut nails, screws, files, spool silk, anthracite coal, steel rails, *etc.*, of which the supply and the market

value are fixed by agreement by strong associations of producers. The scientific significance of this transition is a question for immediate study. Have we come unconsciously under a *régime* of arbitrary values? Is the old regulating principle, competition, abrogated? Is it subject to disturbances so vast and uncertain as to baffle scientific calculation?

The practical inquiry must be guided here as elsewhere by a study of principles. Combinations have their roots in the nature of social industry and are normal in their origin, their development, and their practical working. They are neither to be deprecated by scientists nor suppressed by legislators. They are the result of an evolution, and are the happy outcome of a competition so abnormal that the continuance of it would have meant wide-spread ruin. A successful attempt to suppress them by law would involve the reversion of industrial systems to a cast-off type, the renewal of abuses from which society has escaped by a step in development. Combinations are to be accepted, studied, and, probably, regulated; they ought not to be suppressed if such action were practicable. This action is fortunately not practicable except in the early stages of their growth, while their form is still crude, and while the initial difficulties of the system are great. The repressive policy may then, for a time, succeed; but it must be at the cost of social retrogradation and economic loss.

Modern production is not an individualistic process; it is the act of society as a whole, and each separate man in the ranks finds his function narrowly limited. Parts of the productive operation are assigned to sub-organizations, and these are subjected to a discipline which limits each member to an infinitesimal part of general industry. He may be one of a group that collectively cuts trees, or of another that saws logs, or of another that fashions lumber into furniture. The chair that a primitive settler would have hewn out with an axe is the product of one of the numerous sub-organisms of society. The relations of these sub-organisms to each other, though intricate, are capable of clear analysis. We select a typical one for study, and, to avoid confusion, consider no relations that are not essential to

our present purpose. Crudely represented, the furniture-making group arranges itself as follows:

Finishing
Cabinet making
Transporting
Lumber dealing
Wood cutting

Each stratum shows a subdivision into capitalists and workmen; and in each case there range themselves on the side of the capitalists a few men of managing ability, who constitute with their employer a sort of collective *entrepreneur*, and whose rewards, in the form of salaries, have more in common with profits than they have with wages.

True competition is limited by nature to the strata here indicated; cutters compete only with cutters, lumber dealers with lumber dealers, *etc.* The distinction between this grouping and that of Professor Cairnes consists, not in the fact that the classification here proposed follows the lines of occupation, but in the fact that it is based on real and not on potential competition. Whether a workman can or cannot transfer himself from one sub-group to another is a question which we do not raise. We inquire simply with whom he competes while remaining in his own group and continuing to discharge his special function. In this lies the practical fruit to be gained by a study of the grouping. As bearing on the direct adjustment of relative wages, the question to be considered is: Whether wood-cutters are potential competitors of furniture makers, *etc.*; whether they or their children have such a choice of occupations open to them that the rewards of all tend toward a general uniformity? As bearing on the question which we are now considering, the point to be studied is: What groups of men are brought into competition with each other by the nature of their industrial functions, and what consequences result from this grouping? It is to be noted, moreover, that in the sale of commodities, finished or unfinished, the competition is not between

workmen, nor between employers, separately considered, but between industrial establishments in their entirety. One furniture manufactory as a whole competes with another. Each is an organism in itself; and although the employer in each case becomes the owner of the product, and places it in his own name upon the market, yet his relations with his men are such as to make them partners in the sacrifice which creates the product, and in the rewards derived from it. It is the efficiency of both workmen and employers, and the relations between the two, that determine the competing ability of an industrial establishment. Competition in the sale of commodities is limited to establishments of the same sub-class; it is confined by nature within horizontal lines like those which, in the case of one representative group, we have indicated in the foregoing diagram.

These sub-groups are now solidifying. Within many of the pairs of parallel lines competition has exterminated the weak producers, and becoming fiercer as the survivors become fewer and stronger, is compelling them, in the end, to unite or perish. "Let us have peace" has become the watchword in this part of the field; and the truce which has ensued has taken the form of a system of producers' combinations.

These unions aim to fix prices and, as a means thereto, to restrict production. The one process limits actual competition, and the other potential. To decide upon a price list, and to abide by it, is to allay the rivalry between similar producers; to restrict production is to disturb the relations between dissimilar producers. An arbitrary restriction upon the amount of a commodity which can be placed upon the market checks the enlargement of the industry, and thus obstructs the transfer of labor and capital from group to group — which is the potential competition of Professor Cairnes' theory. Could each group solidify into a corporation that could control its members within and suppress rivalry without, the whole industrial field would become definitely non-competitive. The old regulator of values would be lost, and the appeal for state intervention would acquire great force. The study of the coming interval is that of

the principles which make a general appeal of this kind unnecessary. It is the study of competition in residual forms. The process is taking on an advanced type, less simple than that of earlier times, and more legitimate than that which has lately developed. Residual competition of the actual kind subsists between productive establishments of comparatively equal strength in combination with each other; and residual competition of the potential kind is maintained between the entire combination and the remainder of society. The members of the pool are still rivals; and capital and labor may still transfer themselves to and from the industry which they try to control. Monopoly prices have not been long maintained by any of these organizations; and this fact is due, not to chance, but to complex and interesting economic laws. Leaving the discussion of these principles to one whose analysis derives weight from practical observation, I close this paper with a brief reference to the conditions which determine the transition from the era of predatory competition to that of union.

If each industry were represented by a diagram like the one by which we have rudely shown the relation of sub-classes in the furniture-making group, it would be found that the horizontal lines which bound the fields of competition bound also those of combination. The combining groups are the natural competing groups of industrial society. The limitation of these fields is important. The fewer are the competitors, the fiercer is the strife and the greater is the need of union. The fewer are the competitors, the easier is the pooling process. The effect of the union is to turn the belligerent energies of society in a new direction. Under the old system it was rival producers that destroyed each other; under the new system it is producers of dissimilar articles whose interests come into overt conflict. To limit the supply and raise the price of a commodity is to make members of other producing groups give for it an increased proportion of their own products; and if this attempt is met by a similar proceeding on their part, there results an industrial war, the battles of which are fought across the horizontal lines, instead of between them. If unions were general, the lumber-

men of the foregoing diagram would cease to attack each other, and collectively do battle with the transporters and furniture makers. Treaties of alliance on the old battle-ground, hostility at the point of former amity, — such are the results of the transition to the new system. The field of economic war and the nature of the belligerent process are both changed.

Combinations are the product of a social evolution, and can have no permanent existence until the Darwinian contest between the weak and the strong has completed its work. The surviving competitors must be few, strong, and nearly equal. Marked inequalities of strength among the members of the group defer the formation of the union, or break it when it is formed prematurely. Rivals do not combine so long as one is conscious of the power to exterminate the other. Moreover, strength for such a contest consists not merely in the size of a producing establishment, although that is an element to be considered; it consists primarily in advantages for economical production. Location is important, but the paramount influence is the mastery of cheap methods. Natural selection locates industries in the most favorable localities, and brings them to some equality in method; and until this is done there is no chance for an economic truce.

In agriculture the number of competitors bars the way for the formation of unions. It is to be noted that the prices of food products are especially sensitive to changes in supply; and if a combination could restrict the crops uniformly and very moderately, it could force the members of other industrial departments to pay double or quadruple prices for the means of living. Against such a calamity the nature of the agricultural industry interposes its bar. Anthracite coal is somewhat like a food product in its importance, and in the variations which the price undergoes in consequence of changes in the supply. Coal-mining affords strong inducements and exceptional facilities for the pooling process, and it is here that the effects of union are especially harmful to society. That the injury thus far done has not been greater than it has been is due to residual competition, though it has worked under unusual disadvantages.

The value of this regulating agent under favorable circumstances must be indefinitely greater.

Portability in the commodity produced is essential to the formation of a combination on a national scale. The large establishment must be able to reach with its product the entire territory, and that without incurring a cost for transportation which would prevent it from underselling the small local producers. Baskets are made with great economy in a large shop; but their bulk subjects them to a cost for transportation that enables the local manufacturers, though working with less economy, to hold their respective fields, and defeats the formation of a union in this industry. In the silk manufacture the freight costs practically nothing, and the mill which produces cheaply has at its command all parts of the national territory to which its agents choose to travel. The silk industry offers, in this respect, a favorable field for combination. Moreover, cheapness of transportation depends not only on the nature of a product, but also on the development of an efficient railroad system. The low rates for freight now prevailing in this country have done much to create combinations among manufacturers; if pools among the railroads themselves were to restore the former cost of transportation, they would undo this work. The economic war between transporters and other groups of industrial society promises to result so favorably to the other groups as to facilitate combinations among them.

In but few instances has the principle of union among producers shown a capacity to cross national lines; and in so far as a protective tariff debars the foreigner from being an efficient competitor within the limits of a country, it hastens the formation of pools within those limits. In any case foreign competition acts as a check upon the raising of prices after a combination has been formed.

The industrial world would seem to be dividing into two portions, in one of which, embracing the most important of all forms of production, namely, that of agriculture, the principle of individual competition continues, and produces results so beneficial to society as to justify the enthusiasm of the early

economists for competition as a regulator of values and a divider of the fruits of industry. In the other economic division, embracing transportation and a majority of manufactures, the principle of combination is asserting itself, and introducing a *régime* in which prices are regulated by competition in latent and residual forms. Whether these surviving types of competition are so nearly adequate to the regulating work which must be done that no state action is called for, is a debatable question. Whether state action should take the form of a legal suppression of combinations is a question which a brief trial of such a policy would place beyond the debatable line. To regulate combinations is possible and, in some directions, desirable; to permanently suppress them is impossible; to temporarily repress them is either to force them into illegal forms, or to restore the internecine war from which a natural evolution has delivered us. To accept the results of this evolution and to meet the demands of the new era is the part of wisdom.

JOHN B. CLARK.

THE PERSISTENCE OF COMPETITION.

THE late Walter Bagehot probably knew the "market" better than any other thinker who has grappled with theoretical questions of political economy. This fact lends weight to his views of the present, past, and future of competition, as presented in those luminous essays on *The Postulates of English Political Economy*, written just before his death. John Stuart Mill had said that "only through the principle of competition has political economy any pretension to the character of a science," [1] — a dictum that compressed into a sentence the economic system of Ricardo, James Mill, Senior, and McCulloch. John Stuart Mill himself distinctly recognized the hypothetical character of this system, and in the chapter on "Competition and Custom" he undertook to show that it was only the wholesale trade and the great articles of commerce that were really under the dominion of competition. At the same time he asserted that the influence of competition was "making itself felt more and more through the principal branches of retail trade in the large towns," and that "the rapidity and cheapness of transport, by making consumers less dependent on the dealers in their immediate neighborhood," were "tending to assimilate more and more the whole country to a large town." Mr. Bagehot, bringing to his investigations a rare mastery of deductive reasoning, a breadth of view gained by many excursions into the domains of history and physical science, and the worldly sagacity of a practical business man of Lombard Street, became convinced that the fundamental postulates of English political economy, besides being only hypothetically true for a great portion of modern European society, were not true at all for uncivilized and semi-civilized societies, nor for European societies in their primitive eras. His demon-

[1] Principles of Political Economy, chapter on Competition and Custom, second paragraph.

stration that in the undeveloped society there is no free transferability of labor was based largely on the researches of such investigators as Sir Henry Sumner Maine; but his demonstration that capital was not so transferable until very recent times, and in modern times is so transferable only in the great commercial nations like England, is peculiarly his own. It consists in showing that the free transferability of capital, and therefore the perfect competitive action of capital, depends on three conditions, namely: the existence of a vast loan fund, the existence of a vast speculative fund, and the free movement of young men into those channels of business that promise the largest profits.[1] Formerly neither of these conditions existed. Until recently they existed only in financial centres like London, but to-day they exist so generally that their influence begins to be universally felt. In this fact Mr. Bagehot discerned the true cause of the rapid extension of competitive economics beyond the limits of wholesale trade. The laws of the "great commerce" were being irresistibly forced upon the minor commerce. Accordingly he concluded: "As 'men of the world' are the same everywhere, so the great commerce is the same everywhere. Local peculiarities and ancient modifying circumstances fall away in both cases; and it is of this one and uniform commerce which grows daily, and which will grow, according to every probability, more and more, that English political economy aspires to be the explanation."[2] In a word, it was Mr. Bagehot's final conclusion that the mobility of labor and capital is to become practically perfect, and the economic science based on "the principle of competition," though not true at all of the economic world of the past, is to become completely true of the economic world of the future.

Meanwhile Professor J. E. Cairnes, in his attempt to adapt the deductive political economy more perfectly to the present facts of economic society, had discovered limitations of competition not imposed by "local peculiarities or ancient modifying circumstances," but inherent in the nature of men, and there-

[1] Economic Studies, edited by R. H. Hutton, pp. 45–47.

[2] Economic Studies, p. 20.

fore permanent. Here, then, in the constitution of the "non-competing groups" was an obstacle to the fulfilment of Mr. Bagehot's predictions that could by no possibility disappear. This limitation was not regarded, however, as of the greatest importance. It would have the effect of creating a sort of stratification of prices, but within each stratum the prices of specific services and things would be determined more and more perfectly by competition. Professor Cairnes himself distinctly admitted the importance of the loan and speculative funds as a competitive force.

> It is plain, too [he said], that the capital thus disposable is sufficient for the purpose we have here in view, namely, to render competition effective among the various industries; since we find a portion of it constantly moving abroad for foreign investment — a destination it would scarcely receive while there was a prospect of reaping exceptionally high returns from investment within the country. We have, therefore, in the existence of this fund all that is required for a practically effective competition, so far as *one* instrument of production is concerned, and this without necessitating any serious encroachment on the capital actually engaged in productive operations.[1]

Little more than a decade has passed, and we witness a state of things that, to superficial observation at least, seems totally to contradict these final conclusions at which Ricardian political economy had arrived. Just when the disappearance of the last vestiges of a volitional restriction of competition was looked for, and the universal application of the "rule of the market" was confidently expected, we see a wide-spread revival of economic methods and agencies over which *The Wealth of Nations* was read as a funeral service. And most remarkable of all, it is not only labor, to the absolutely free competition of which natural and permanent limitations were admitted, but capital — that very agent which Mr. Bagehot said "runs as surely and instantly where it is most wanted and where there is most to be made of it, as water runs to find its level," [2] that seems to have voluntarily massed itself into a solidarity, hedged itself about

[1] Leading Principles, Harper's ed., pp. 63, 64.
[2] Lombard Street, p. 13.

with new and most ingenious restrictions, and bound itself by heavy penalties not to run to any new level or deviate from wonted channels. This increasing prominence of pools and combinations has given a new direction to theoretical thought. A majority of the working economists who have kept up with the progress of events no longer look to see the supremacy of an unhindered competition. By not a few of the ablest investigators the gradual suppression of the competition now existing is predicted. Instead of moving toward freer competition, they affirm, we are moving away from it,[1] and reasons are offered to show that in the very nature of business facts no other result is possible. Not only of such vast organizations of capital as the railroad system is this tendency supposed to be true, but of almost all industries having a large permanent investment.[2] New agencies for adjusting prices it is expected will be necessary. Between a solid body of non-competing employers on one side, and a solid body of non-competing workingmen on the other, will have to stand committees of conciliation and boards of arbitration.[3] The standard of the *justum pretium*, the "reasonable price" of the middle ages, will be again set up and enforced by an appeal, through compulsory publicity, to public opinion.[4]

That combinations are to play an increasingly important part in economic affairs, is altogether probable. But that competition is to be to a corresponding extent destroyed, and that arbitration and publicity are to perform any other function than that of equalizing temporary inequalities of competition, as commercial credit equalizes temporary inequalities of economic pressure, or as insurance equalizes temporary inequalities of loss, are conclusions that should not be too hastily accepted. We should be on our guard against two assumptions. We must not assume that because competition is not observable in the form seen on the produce exchange, it is not discoverable in

[1] Arthur T. Hadley, Railroad Transportation, p. 65.

[2] Hadley, Private Monopolies and Public Rights, *Quarterly Journal of Economics*, October, 1886.

[3] John B. Clark, The Philosophy of Wealth, p. 66.

[4] Report of the Connecticut Bureau of Labor Statistics, 1885, pp. 16, 106.

any form. We must not assume that when market competition is imperfect it may be ignored, as if it were quite non-existent. These assumptions would be as unwarrantable as the assumption of the *a priori* economists has been in regarding the laws of the wholesale market as so nearly true of economic society everywhere and always that conflicting facts might be dismissed as irrelevant. That competition in some form is a permanent economic process, is an implication of the conservation of energy. Given an aggregate of units of unequal energy, their unequal activity is an inevitable consequence. With the complexity of social environment that every quarter of the earth presents, and the limitless variations of heredity, a society composed of individuals of equal energy is an impossibility. Therefore, when market competition seems to have been suppressed, we should inquire what has become of the forces by which it was generated. We should inquire, further, to what degree market competition actually is suppressed or converted into other forms, and within what limits combinations can hold together and act effectively. The combination equilibrium may be, at best, an unstable one. The economic affairs of every member are in a constant ebb and flow. The relative advantages of members as possible competitors cannot remain long unaltered. And however nearly equal they may be at any moment in economic strength, they will be unequal morally. Not every member of a combination goes into it expecting to break the agreement, but hoping that all other members will keep it ;[1] but this is a true description of the conduct of some. Different producers are always unequal in respect of that larger fidelity that imparts a unique value to a commodity through care in selecting the best materials and the most careful and trustworthy workmen. They are unequal also in those faculties by which production is adapted to changing conditions. The discerning and alert secure the advantages that accrue from the first production of superior substitutes for articles in common use, or the first adoption of more economical methods. Disturbances of equilibrium by any of these means may requicken

[1] J. Schœnhof, The Industrial Situation, p. 74.

competition within the combination. Competition may be forced upon the combination from without by the accumulation of outside capital seeking employment. The latter is a force that nothing can overcome, though it may be to some extent diverted. It is the organic process of growth, multiplying cells in the vital organism, multiplying individuals in society, multiplying capital in financial centres, — all crowding perpetually upon the existing means of subsistence and profitable occupation, — that insures the permanence of competition throughout the whole range of organic phenomena.

The history of combinations to the present time fully verifies these propositions. Combinations have not prevented the competitive investment of new capital, or sustained prices, or maintained an effective discipline among their own members. The general decline of prices has gone on with little interruption since 1870; that is, during the period within which combinations have had their phenomenal growth. Late calculations[1] give the money cost of the average daily supply of food, dry goods, boots, and fuel, for one adult, as 43.53 cents in 1870, and 30 cents in 1885. The charge for moving a ton of freight per mile over one of the trunk line pool roads is given by the same statistician as 1.853 cents in 1870, and .68 cents in 1885.[2] The industrial depression of 1883–84, which carried nearly all prices to a much lower level than they had reached in the previous depression of 1878–79, did not spare the goods "controlled" by combinations. As compared with the lowest prices at which they were quoted previous to 1882, cut nails were 12 per cent lower in 1884, and steel rails 39 per cent lower.[3] The nail industry affords a good illustration of the inability of combinations to withstand the competitive action of new capital. In 1883 the Western nail association made several attempts to restrict production by suspending work. Notwithstanding this, the number of mills was increased during the year from 68, having an annual capacity of 8,500,000 kegs, to 79, with an

[1] Those of Mr. Edward Atkinson in *Bradstreet's* of December 18, 1886.

[2] The Relative Strength and Weakness of Nations, *The Century*, January, 1887.

[3] *Bradstreet's*, January 10, 1885.

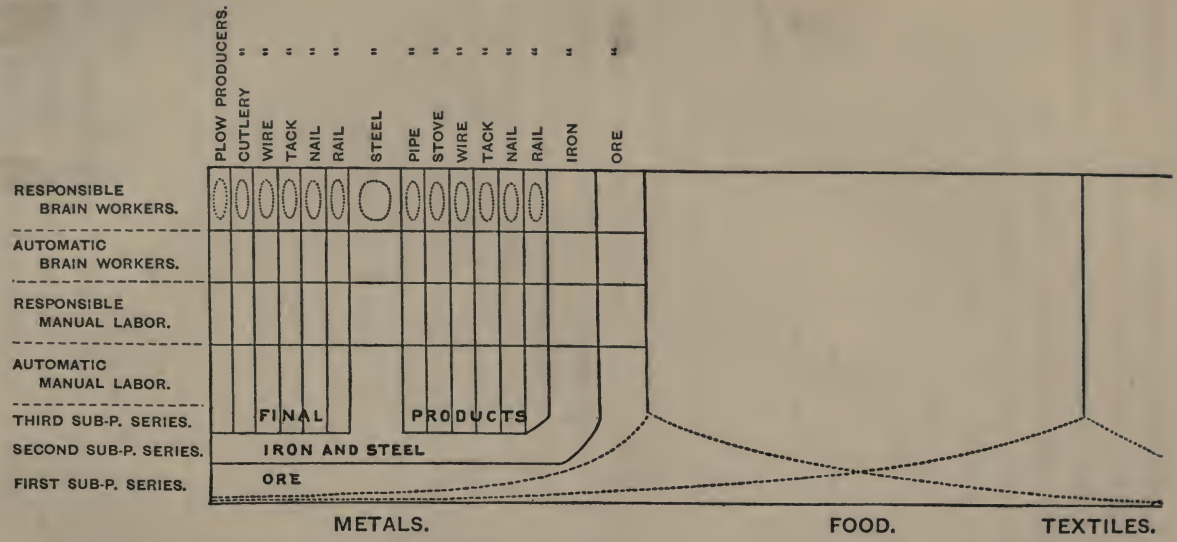
annual capacity of 12,500,000 kegs, and half of the increase was in the western district.[1] In 1884 a new effort was made to restrict competition; but almost before it took shape the manufacture of nails from steel began, and within a year the steel nail mills that sprang up in the Wheeling district, not to mention others, had a capacity of 2,600,000 kegs per annum.[2] Combinations that might be expected to be strong and efficient, because of their enjoyment of franchises and natural monopolies, are all the while breaking because of internal disagreements. No longer ago than the autumn of 1885 trunk line railroad business was completely disorganized because the roads could not agree on their respective allotments. The anthracite coal combination, formed in 1873, succeeded in controlling the output for three years. Prices were gradually forced to a height that the market would not bear, and stocks accumulated, in spite of the restriction of production, until the combination broke, in August, 1876, and 500,000 tons of coal were sold at auction. Another attempt, made in 1878, was broken by rate-cutting by the Lehigh Valley company and the contention of the Reading company for a larger allotment. A third combination lasted from 1879 to 1884, when its efficiency was destroyed by the commercial depression and the increasing resort to bituminous coal.[3] A fourth arrangement, made in 1885, has been imperfectly successful. Of all the industrial combinations that have been described in alarming terms in the popular reviews and anti-monopoly organs, probably not one-tenth have continuously and effectively limited competition. One of the most perfectly organized and most talked about of these has been the wall-paper combination, and its fortunes have been peculiarly instructive. It was formed in 1880, and made a great deal of money. One party was paid $20,000 a year to cease production. A scale of prices was established, and every member was assigned his proportion of the total production. The penalty for underselling was a forfeit of $1000, one-half to go to the informer. Monthly meetings were held, at which every manufacturer presented a detailed statement of his sales,

[1] *Bradstreet's*, May 10, 1884. [2] *Ibid.*, July 18, 1885. [3] *Ibid.*, January 17, 1885.

specifying the quality and price of every roll sold, and naming the purchaser. Then the executive committee equalized the proceeds, taking from those that had oversold, and distributing among those that had not sold up to their quota. Yet, notwithstanding these elaborate precautions, competition was not prevented, either within the combination or from without. One member has chosen to pay $10,000 a year in forfeits rather than desist from underselling. By paying factories for keeping idle, the combination has tempted so much new capital into the business that it is now impossible to control production or prices.

The conditions determining the area within which combinations can govern market competition, divert it into new channels, and convert it into new forms, are to be found in certain natural demarcations in the industrial structure of society. This structure, resting on the basis of crude materials, which it transforms, adapts, and consumes, is constituted by the segregation of men into functional groups, corresponding to the subdivisions of industrial operations and the broader differences of personal qualification. A rude attempt to indicate this structure is made in the diagram upon the following page. The subdivision of operations corresponds to the evolution of general utilities into utilities that are more and more highly specialized, and to the division and redivision of materials into successive sub-products,[1] or, more strictly, into successive series of sub-products, as the diagram indicates. Professor Clark has shown that the gradation of sub-products marks off the producers into non-competing groups of an entirely different kind from those described by Professor Cairnes, and that the latter, constituted by such differences of personal acquirement as those that separate artisans from unskilled laborers, have been much broken down by industrial progress. Yet there remains a grouping by differences of personal qualification, which Professor Cairnes failed to state in sufficiently general terms. There is one class of workers fit only for automatic manual labor; namely, common laborers and machine tenders. Above these is a class fit to be

[1] John B. Clark, The Philosophy of Wealth, p. 112.



The diagram indicates the division and sub-division of industrial society into groups and sub-groups, by industrial operations and the broader differences of personal qualification. The vertical lines show the division, and, in the group metal producers, the sub-division, into non-competing groups corresponding to industrial operations. The long dotted lines indicate the inter-dependence of the great chief groups, metal, food, and textile producers. The first three horizontal lines, counting from the top, show the division — cutting across the division by industrial operations — into non-competing sub-groups constituted by differences of personal development. The continuation of vertical lines into the lower horizontal lines shows the relation that the producing groups sustain to the gradation of industrial operations into primary, secondary, and tertiary sub-processes. Combinations are represented by the elliptical dotted lines.

intrusted with some responsibility and liberty of self-direction. It is impossible for those in the first class to compete for places with those in the second, though those in the second may become competitors with those in the first in times of industrial depression. A third class is composed of the automatic brain-workers, such as book-keepers; and a fourth class, of the responsible brain-workers, including the superintendents and directors. The basis of these distinctions, it will be seen, is a much broader one than Professor Cairnes had in mind as the ground of his grouping. It is also broader than the differences of moral quality that the adjective responsible, used for the lack of a more exact word, suggests. It is that broadest psychological gradation, which Mr. Herbert Spencer has described as consisting of differences of mental mass and complexity.[1] These divisions cut transversely across those described by Professor Clark, and constitute sub-groups within his groups. It is, further, within the non-competing groups so constituted that combinations are formed; and, for reasons fully set forth by Professor Clark, any one combination is usually confined within the limits of a single group. This introduces a new complication, for the combination is a radically distinct aggregate from the non-competing group within which it exists. While the non-competing group consists of those that are supposed not to compete with the members of any other group, but to compete freely with each other, the combination consists of those that are supposed not to compete at all with each other, but to compete freely with those outside of its limits. The employer groups and combinations are further complicated by the centralization there of capital.

It is plain that these demarcations describe groups that are very unlike in composition and very unequal in economic condition. Heterogeneity of composition increases as we go backward in the scale of sub-products toward crude materials, because the dimensions of the group enlarge, both geographically and in respect of numbers. The group producing a final sub-product is necessarily limited in size, not only because it repre-

[1] See the article on The Comparative Psychology of Man, *Mind*, January, 1876.

sents a minute sub-division of a more general product, but because the quantity of a highly specialized product that society can consume is itself limited quite narrowly. The market is easily oversupplied and demands but a relatively small number of producers. It follows that the possibilities of combination are slight in the large and loose groups that produce the primary sub-products, unless their operations are protected by natural, or legal, especially patent-right, monopolies. In the small and compact groups producing final and highly specialized sub-products, the possibilities of effective combination are much greater. Anthracite coal mining is a primary process, but it yields to combination because it is a natural monopoly and easily forms illicit alliances with the railroads. Steel making is a secondary process, amenable to combination because protected by patents; but in iron making, also a secondary process, combination is maintained very imperfectly and with great difficulty. Besides being at this disadvantage in the matter of combination, the primary and secondary sub-product groups are subjected to the further strain that disturbances of the economic equilibrium, anywhere in the industrial structure, distribute themselves backward toward the primary groups. Within each group the distribution is downward, through the sub-groups toward the lowest — the automatic laborers. A strike that stops the production of a sub-product may cause the suspension of operations and the bankruptcy of producers in the sub-product group beyond it, by cutting off supplies; but the liabilities of the advanced group will be due chiefly to the preceding groups, and the bankrupted employers and discharged workmen will force their way downward as competitors for employment; some of the bankrupted employers obtaining places as clerks, and some of the clerks and foremen taking work as machine tenders and laborers. Furthermore, as Professor Clark has shown,[1] the primary and secondary groups dispose of their products to society and receive their recompense only through the tertiary, and are therefore much at the mercy of any conditions that the latter may impose.

[1] Philosophy of Wealth, p. 114.

One important conclusion is now in sight. When a product is supplied to society in the full measure of the social needs, the supply of correlative needs being taken into consideration, the further investment of capital and labor in producing that product should cease. That combinations in the final sub-product series may often restrict competition to this extent is evident from the fact that they often attempt to do more. What, then, becomes of the competitive forces — where do accumulating capital and labor find employment? We are confronted here with our primary question, and the answer to it that now appears is one full of meaning for progressive societies. Diversion backward into the primary or secondary sub-product groups would be the natural course for labor and capital to take when barred out from the final groups, but for the facts just noted; *viz.*, that the primary and secondary groups are dependent on the tertiary for their market, and are obliged ultimately to bear a large proportion of the losses of the entire industrial system. In progressive societies, rich in inventive talent, channels of less resistance will be opened by the invention or discovery of new utilities. These may be satisfactions of wants that were never met before, or they may be superior substitutes for the products that the new capital was deterred from producing. The possibilities in the latter direction are shown by the present production from steel of such articles as rails, nails, tacks, and wire, that formerly were made only from iron. The production of Bessemer steel ingots during the first six months of 1885 was 40,000 tons in excess of the production during the second six months of 1884. The production of steel rails was 70,000 tons less. The difference had gone into other manufactures for which puddled iron was formerly used.[1] In societies that have learned to value quality above quantity of possessions, other channels will be found in the almost limitless possibilities of bettering the quality of commodities. New utilities afford opportunities for capital accumulating outside of the combinations; the improvement of quality gives vent to competitive energies within the

[1] *Bradstreet's*, August 1, 1885.

combinations. How this may be, is well illustrated by a certain brass goods combination that has maintained uniform prices but made no attempt to pool production. The result has been precisely that higher form of competition that John Ruskin advocated in *Unto This Last* as the only one that Christian communities should tolerate. The members of the combination have rivalled each other in offering the most perfect goods for the price, and their products have attained a degree of excellence that is unique in American mechanism.

But that competition shall be thus diverted into new and higher forms, it is not necessary that combinations shall keep production below the full supply of the social needs, or maintain prices above the level that yields average returns to the labor and capital employed. Taking one series of years with another, neither of these things can be done. While the area within which combinations are possible is determined by the industrial structure, the degree to which they can control competition within that area is limited by the strength of the competitive forces. These, as we have seen, are two: the pressure of accumulating capital upon the opportunities of employment, and the necessities of the producers already in the field. During an industrial depression the active competition of new capital is at a minimum, but the established producers find increasing difficulty in meeting their liabilities. Self-defence becomes the ruling motive. Conversely, when demand is increasing and prices are rising, the pressure of new capital becomes intense; but, the struggle to meet liabilities having given place to an easy accumulation of gains, the motive for resisting the competition of new capital is weak. Combinations are therefore, in their historic origin and in practical limitations, defensive organizations, for mutual protection against a competition that has become, or that threatens to become, predatory and ruinous. It was during the industrial depression of 1883, when production was far in excess of the demand, that the cut nail combination, already referred to, tried to restore the balance by suspending operations. It was when the prices of their product had declined nearly 13 to 15 per cent within

six months, that the writing paper manufacturers effected a combination that limited production temporarily, but that had the ultimate effect, as one of its members assured the writer, of "building new mills." When the Bessemer steel rail combination made its compact at Long Branch in August, 1885, to limit its output by the demand for consumption, the capacity of the works represented was greatly in excess of the demand, and price-cutting within the combination had been going on for some time. The market improved, and, at the end of a year and a half, the Bulletin of the iron and steel association announced that 1,500,000 gross tons of steel rails were made in 1886, against 950,471 in 1885. And this improvement of the market, enjoyed by other branches of the iron and steel industry also, instead of tempting the combinations to extort the highest possible prices, created a strong feeling on the part of manufacturers that if prices were permitted to go higher, it would so largely increase production as to bring about a reaction.[1] These are but examples at random from many that might be cited. If statistics of the extent and efficiency of combinations could be obtained, the curve undoubtedly would rise and fall with the curve of industrial depressions.

The degree to which combinations can restrict competition is further limited in more specific ways. As defensive organizations they cannot sustain their weakest members indefinitely. All business is in a sense a combination. Commercial credit and personal accommodation enable all parties in the great struggle for existence fairly to try their powers. By such assistance temporary difficulties are overcome. Combinations perform a like service in a negative way by restraining conduct that is mutually injurious. But just as recurring waves of bankruptcy from time to time sweep off the competitors that are essentially weak, notwithstanding the help that they may have alternately received and extended, so an industrial depression of unusual severity or duration forces one or another party to unload his stocks at any prices that he can get, regardless of combination agreements, and consummates the extinction of

[1] *Bradstreet's*, December 25, 1886.

those producers whose disadvantageous situation or antiquated methods make their cost of production relatively high. On the other hand, any attempt of the combination to become an aggressive agency for the positive enrichment of its members is subject to the limitation, that the conditions that might enable a combination to force prices to an unnatural level are the very ones that insure the most disastrous reaction upon such a policy. Other things being equal, new capital will hesitate longest about entering into competition with established producers in those industries in which each producer must have a plant that is costly in proportion to the value of the total product of all producers. But the combination that would reap advantage from this hesitancy must face the fact that it is precisely this expensiveness of plant that entails heavy fixed charges, — which must be met at whatever sacrifice of profits, — and impels competition to a ruinous extreme if more capital is tempted into the business than the normal social need requires. A short-sighted and grasping policy by railroad companies and industrial combinations that might, by a liberal course, have kept entire markets to themselves, has resulted in the building of scores of railroads and hundreds of mills for which no real need existed, and the struggles of these for subsistence has kept rates and prices below the dividend-paying level for years together.

Hence, as combinations learn their unalterable limitations in "the nature of things," they must adjust prices and production, by a conscious policy, to the normal basis that otherwise will be reached in a more wasteful way. They must permit the full satisfaction of normal demands and allow prices to gravitate to an equality with cost of production. If there is really room for new plant, and new capital seeks investment in new plant, the combination by standing in the way will only encourage investment in excess. If a member of the combination, or a new competitor, is able through the adoption of new machinery or better methods, or by any other advantage that he enjoys, to make his goods at a lower cost than has been possible before, and therefore to put them on the market at a lower price in the

hope of increasing his sales, the combination must let him make the price and leave other members to conform to it by adopting his methods. Failing to do this, it will but intensify the inevitable struggle for survival when it comes. It does not invalidate all this that pools sometimes pay would-be competitors for ceasing production, and that members of combinations can sometimes afford to pay forfeits for price-cutting. These are but means of testing the probable permanence of the existing relations of demand and supply. If the undersupply of the market that tempts new capital is but temporary, the price paid to prevent it from entering the field is the cost of warding off a loss otherwise certain. If the undersupply continues, the attempt to buy off competition will only stimulate it. If forfeits were graduated according to the degree of price-cutting and the volume of sales, and were made recoverable by the party paying them if he demonstrated his ability to maintain his terms permanently, they might afford a nearly perfect test of the price the combination must prepare to accept, and a nearly perfect check against underselling for predatory purposes. Expenditures in these ways, within the limits dictated by prudence and the lessons of experience, are elements in the cost of production under modern conditions as legitimate as insurance premiums, and it is not impossible that combination actuaries will yet reduce the principles governing combination forfeits to something like scientific form.

If our conclusions so far are sound, can the affirmation be maintained that market competition has been really suppressed, or that the essential principles of Ricardian economics have been overthrown? Ricardianism never contemplated competition in the production of additional goods for a market already overstocked, or chronic competition in selling goods below the cost of production. It assumed that when competition had forced the price of any commodity down to the sum that barely recompensed labor and risk, production and underbidding would cease and labor and capital would find other employment. When Ricardo wrote, this assumption was warranted by commercial facts. It is only when production is carried on by processes

involving heavy fixed charges that producers are impelled to continue operations without regard to the state of the market. It is only when large reserves of capital can be drawn on that it is possible to sell below cost, on a great scale, for the sake of winning a strategic advantage. In Ricardo's time these conditions did not exist in any trade or manufacture. If, then, combinations deal effectively only with competition below the solvency line, are not the essential Ricardian principles as true to-day as they ever were, and are not Mr. Bagehot's predictions verified? The competition that wastes resources and ruins competitors is an abnormal process that in a sound industrial system will necessarily create reactions against itself. Such competition will probably encounter an increasingly perfect resistance. The competition that forces production to supply fully the social demand, and forces prices down to an equivalence with the cost of production, is normal. Limitation of the range through which the series of competitive acts may extend but increases the amount of normal competition, since by preventing the wasting of capital it increases one of the chief competitive forces.

FRANKLIN H. GIDDINGS.

PROFITS UNDER MODERN CONDITIONS.

WE are drifting toward industrial war for lack of mental analysis. Classes in society are at variance over a ratio of division, and have no clear conception of the thing to be divided. If the profits of business constitute a limitless fund, they furnish a corresponding incentive to strife; and if this sum is virtual plunder, if it consists of wealth wrested by a social arrangement from the men whose labor creates it, the discontented class ought to include every member of society, and will include most members. It needs to be definitely known what profits are, and who earns them; and again how large they are, and who actually gets them. The nature of the prize of the social contest and the equities of the case need to be made far clearer than they have been.

Adam Smith's "profits of stock" included the general returns of the capitalist-employer. More recent writers have recognized that this person performs two functions, and receives a reward in each capacity. That which accrues to him as a capitalist is interest; and that which comes to him as an employer, or business manager, is known as *entrepreneur's* profit. This element is computed by deducting from his gross returns the interest on the capital that he uses.

What is not recognized in the prevalent theories is that the entrepreneur as such is a composite person. Besides furnishing some capital he still performs two unlike functions, and receives two distinct rewards. Of these rewards one is constant and the other intermittent; and it is this latter element that, as vaguely conceived, constitutes the incentive to social strife. It is the fact of confounding the two functions and merging the rewards attaching to them that has placed economic writers where it has been impossible either to make consistent theories or to comprehend the developments of modern business.

An entrepreneur is, first, an industrial organizer; he directs the productive energies of other persons. If he be a manufacturer he divides and subdivides the labor of making a product, and assigns to each workman the part of the process to which he is adapted. The thing to be accomplished is prescribed; there is a certain article to be produced, and there is an accepted manner of producing it; and the routine function which first falls to the employer consists in directing the operation in its execution. He guards against wastes, impels workers to effective effort, and co-ordinates their labors. By his direction the work of many individuals is brought into organic unity. He is the brain of a little social organism; he does its executive planning, and communicates to the muscles the motive impulses that set them at work and control their action.

In this capacity the employer is the most important part of the *personnel* of the shop. He is a directive laborer. The outcome of his effort is a certain mechanical result, a transformation of matter. Directive labor, muscular labor and machines together create "form utilities"; they transform iron into implements, wool into cloth, *etc.;* and in these changes of form lies the value that they jointly bring into existence. Employer and workman are thus far laborers together; what they get for their efforts is, in the broad sense of the term, wages; and the employer's part is distinctively the *wage of directive labor.*

In addition to this there comes to an employer a return having a wholly different origin and nature; it is essentially mercantile. An employer buys, sells and gets gain like any dealer on the street. The business operations of a woolen manufacturer do not begin with wool in the sorting room, and end with goods in the storehouse. He must obtain the wool from dealers, and must hand the goods over to purchasers. The mechanical part of his business is completed at the mill, and by the working organism of which he is the head; the mercantile part extends into the world, and brings him into connection with other producing organisms. In this particular exchanging function the workmen have no part; the employer only is recognized in the market as the buyer of materials and the seller of goods.

The buying of raw materials, however, does not end the employer's function as a purchaser; there is something more to be acquired if he is to become the valid owner of the product. Into the finished goods there enter other elements than raw materials, and these must be in part acquired by purchase. Within the mill itself there are titles to be transferred. Day by day, hour by hour, as the manufacturing goes on, new utilities come into existence. Every turn of the engine results in more cloth, more yarn, more carded wool, *etc.* The utilities thus created have definite values; unfinished goods may not be immediately salable, but the employer would know how to rate them were he to take an account of stock. Every step in the process that brings them nearer to the condition in which they can be placed upon the market adds something to the value of the crude materials with which the process began. These increments of utility are, as we have said, jointly created by three agencies: directive labor, muscular labor and machines. This determines their ownership: they belong, in undivided shares, to the director, the workmen and the furnisher of machines, or the capitalist.

Now the essential fact is that the employer buys out his partners in the productive operation. He pays for the share of the workmen in wages and for that of the capitalist in interest, and acquires thereby a title to the utilities created in the mill. As the raw material is his from the outset, he ends by becoming the owner of every element of the product. In his own name he may place the goods on the market and get what he can for them.

The function of the entrepreneur as such consists therefore in two operations, the one mechanical and the other mercantile: he directs a productive process, and he buys the elements that enter into the product and sells them collectively in the product itself. In the one capacity he is a laborer and receives a higher variety of wages; in the other capacity he is a merchant, and receives a margin of difference between what he pays and what he gets. The finished goods are supposed to

bring in the market more than the cost of all the elements that compose them.[1]

In a complete study of profits it needs to be noticed that the mercantile part of the employer's function requires both labor and capital. He must spend time in obtaining materials, in making contracts with workmen and capitalists, and in disposing of goods. Here there is a need of labor; and there is a necessity for capital of the circulating kind in the holding of goods until they can be sold and paid for. Mercantile labor as well as mechanical is entitled to wages, and circulating capital as well as fixed is entitled to interest. A mercantile wage constitutes the second part of the general wage of business management; and an item of interest on circulating capital constitutes a part of the general claim of capital.

The labor involved in buying and selling is only incidental to the mercantile function. It is not the essence of it; that lies in the mere acquiring and surrendering of ownership. It is because the elements that enter into a product come successively into an employer's possession, and then pass collectively out of it, that he can look for a return over and above the wages of every kind of labor and the interest of every kind of capital involved in the business operation. We must group in one item all that comes to an employer in compensation for effort of any kind, and in another all that goes to compensate the capitalist.

The general wage of business management constitutes one of the preferred claims on the returns of business; it must be deducted from them before final profits can be computed. Ordinary wages constitute another preferred claim, interest a third and the cost of materials a fourth. If, to avoid intricacy, we group taxes, all forms of insurance and incidental expenses as a fifth claim the sum of these five amounts will represent the total cost of acquiring the title to a product. In selling the product for more than this sum total lies the employer's chance of ultimate gain. Pure profit is the return of simple ownership. It is free from all admixture of wages and of interest. It accrues

[1] This analysis of gross profits was published in *Work and Wages* for March, 1887, in an article by the writer of the present paper.

to him who simply extends the ægis of his civil rights over the elements of a product, and then withdraws it in order that the product may pass into other hands. The *entrepreneur* or *assumer* is he who takes upon himself the responsibility of ownership.

That the capitalist, the manager, and the owner of the product may at times be one and the same person does not affect the analysis; the three functions are distinct, and the rewards attaching to them are equally so. The growth of corporations tends in a practical way to separate these functions. Capitalists are here a body of stockholders, bondholders and business creditors; managers are a body of salaried officials; while entrepreneurs, in the limited sense of the term, are the stockholders. Pure profit resides in the portion of the dividends that is in excess of current interest on the paid-up capital.

Pure profit is the prize that lures men into business ventures. On this element in the returns of industry are centered the larger expectations of working men. There is no other element from which they can draw a considerable dividend by a change in distribution. Though interest were reduced by a half, and managers' salaries curtailed in the same proportion, the sum thus saved would, as divided among workmen, raise wages only by a small fraction. The elastic margin of pure mercantile profit appears to the undiscerning to be a more promising source of gain. It is important to know how large, under modern conditions, this sum is becoming.

The elements in the cost of a product are primarily determined by conditions over which the employer has no control. Wages are fixed in the general market for labor; there is not one rate for a particular manufacturer and another for his rival in the trade, nor are there considerable differences between the rates prevailing in most of the different trades. Labor passes freely from one establishment to another, and even from one industrial group to another, and the permanent tendency of wages is toward uniformity. This large element in the cost of products is fixed by uncontrollable movements in a universal market.

Interest is determined by equally general conditions, and is

uniform to all borrowers who furnish equal guaranties for the certainty and promptness of their payments. The cost of raw materials is determined in a market that is somewhat more limited; it is gauged by the transactions that take place between the industrial group that produces it and the several groups that use it. This market is broad enough to be beyond individual control.

The cost of the labor of management is subject to more disturbing influences than almost any other economic element; and general statements concerning this item of outlay need to be made with adequate reservations. Personal relations may make a particular salary abnormal. The principle that tends to determine the wage of business management may be formulated and, with due caution, applied; it is fixed in a general market for labor of a given intellectual and moral quality. Tried ability and integrity demand high rates of pay, but gravitate toward any honorable occupation that offers them; and the general tendency here as elsewhere is toward a certain uniformity. Rates of insurance and taxation are governed by impartial rules. The elements that constitute the cost of a product to the man who is to own and sell it are fixed by conditions which he cannot change.

His returns are equally beyond his control. The price of his product is adjusted in the open market by transactions between the group to which he belongs and the various groups that contain his customers. The adjustment is similar to that which governs the price of raw materials. Pure profit is the difference between this uncontrollable amount and the sum of the equally uncontrollable amounts disbursed. The reward of the entrepreneur in his capacity as owner of a product comes to him, as rain from the clouds, through the action of forces lying beyond the range of his dominant influence. He has nothing to do but to receive it. He must accept what comes into his treasury, and submit to what goes out of it; the difference, which is pure profit or loss, is fixed without appeal.[1]

[1] Gains effected by the illegitimate manipulation of values, such as is sometimes practiced in Wall Street and elsewhere, do not fall within the scope of this discussion.

In his other capacity, that of manager, the entrepreneur is not the helpless creature of fate. His fortune is largely in his own hands. Moreover the fortune of the owner is, in a negative way, entrusted to the manager, who can always mar it, though he cannot always make it. In a study of profits it needs to be assumed that the shop is running under competent direction; otherwise, under modern conditions, it will quickly pass from the industrial field. Materials must be well selected, the working force well handled, and the goods rapidly and safely marketed, or the pure profit will become a negative quantity, and the business will be terminated. There are transient conditions in which mediocrity may for some time hold its place; but the sword is over its head from the outset, and will fall in due time.

The modern struggle for existence means the survival of the fittest type of industrial establishment. Elements that determine the question of fitness are location, working method and managing efficiency. The shop that is unfavorably located yields its business to others; and industries tend automatically to concentrate in places where they can thrive. The mill that uses an antiquated process must change it or stop working; and industries tend towards uniform mechanical excellence. The establishment that is badly conducted must change its management or fail; and business tends to concentrate in the hands of those who conduct it with the greatest energy and wisdom.

The centralization of industry gives a special impulse to the tendency to eliminate mediocre management; it permits a division of the directive function. There are diversities of gifts in the business world; the good mechanic may be a bad financier, salesman, *etc.* The great establishment places in every responsible position a man specially adapted to it. The entrepreneur of a highly developed establishment is a collective personality. The shop that is under individual direction is no longer typical; and if we continue to speak in the singular number of the manager, the owner, and the capitalist, it is to keep in mind the essential unity of the several groups that the terms must really designate. In clear cut distinctness of function, it is as though

they were individuals ; in efficiency, they greatly surpass them, and tend to supplant them in the industrial field. Modern business demands and secures an aggregation of forces in every department. Groups that have supplanted individual managers continue the competition among themselves, and the entrepreneur that tends to ultimately survive is a body of men, each one of whom has shown special capacity in his department. The typical modern manager is an organization that is perfect in each separate part.

In formulating the principle that gauges the returns of a particular manager at a given time, the analogies between rent and profit are instructive. They have been well utilized by one of the most eminent of living economists, General Francis A. Walker. Having now in view a different end, that of establishing a law of development, and of determining the rate toward which the different elements in general profits are tending, I find it possible to derive complementary lessons from the contrasts presented by the Ricardian principle of rent and the principle that asserts itself in the management of modern business.

The area of cultivation in agriculture is governed by a law of extension ; the range of managing ability is subject to a principle of elimination and contraction. According to accepted formulas the best land is first used, and cultivation then extends to poorer and poorer qualities. The process begins with one grade and ends with many. In general business, various degrees of managing ability come early into the field ; competition eliminates one after another, till the best only is sure of permanent survival. With one qualification, hereafter to be stated, the process begins with many grades and ends, if it is ever completed, with one. The difference in productiveness between the best land and the worst is increasing ; that between the best management and the worst that we need to take account of is diminishing. The rent of lands varies as their qualities, from nothing to an increasingly large sum ; the wages of managers tend, like their business qualities, in the direction of uniformity.

Agriculture is dominated by a law of diminishing returns; and general business by a law of increasing returns. Double the labor and capital expended on an acre of ground and you do not double the crop; double the labor and capital entrusted to an efficient manager and you more than double the product. The concentration of labor and capital renders more costly the products of agriculture; and the same influence cheapens those of general business.

It follows that the demand for agricultural products tends to outrun the supply; while the supply of manufactured commodities tends to outrun the demand. In the one case increasing population is the primary fact; and this calls for more food, *etc.*, in spite of the greater cost at which it is obtained. In the other case cheapened production is the primary fact; and this influence thrusts an increasing product upon the market, notwithstanding the diminished price at which it must be sold. The output of great manufacturing industries is disposed of by a process that tends continually to take on somewhat of the character of a forced sale. The normal condition of many industries is one that, from a business man's point of view, must be termed overproduction; it is the condition in which more is produced at each particular interval than can be sold at prices that through the preceding interval prevailed. It is this final test of oversupply that weak producers cannot endure.

The struggle for existence is pending, and industrial groups show various degrees of approach to the consummation to which it leads. In some groups the surviving establishments are already in a state of high and nearly uniform efficiency; while in others they still differ considerably in this respect. There is, moreover, scattered over the industrial field, an experimenting class, whose presence renders necessary the qualification in the statement of general laws to which reference has already been made. These men are testing their capacity to survive in the contest with men of tried ability. A few win permanent places; the remainder pass from the field; but their transient presence disguises the operation of the law of survival. They must be left out of account if we are to know how far the devel-

opment has proceeded, and what grade of managing efficiency has a chance of permanent continuance. Any group may have its experimenters who are of greatly inferior quality. The old employer who is about to be crowded from the field marks the margin of survival; better managers may remain in the field, while worse ones will be cast out.

The merging of the functions of owner and manager introduces another element of variation, and makes farther care necessary in practically testing the theoretical rule. A man who, besides pure profit, receives a salary and perhaps an element of interest may not take leave of the competitive field when, according to simple theory, he ought to do so. After profits and interest have vanished he may live on a salary, and may struggle against fate till his capital is curtailed. Through all variations in its application, the law of survival holds true, and places in control of the material fortunes of humanity a class of managing agents who are diminishing in number and improving in quality. They are in fact agents and not principals; it is the interests of others that are primarily entrusted to their keeping; for though their wages become relatively high, they are kept within sharp limitations, while the largest fruit of their invaluable labor passes by an irresistible law to society.

Wages of management are radically affected by the division of directive labor. The typical modern manager, as already noticed, is a collective personality. Were the rare qualities that are needed for conducting a great enterprise combined in one man he could command a monopoly wage. It would be impossible to replace him, in case he were to leave his employment; and the limit of his salary would be set only by the paying ability of the capitalist-owner. It is possible to replace any member of a managing organization, and the salaries of the members cannot well be excessive. There is a graded list of candidates for the different positions. Counting rooms are full of potential presidents, secretaries and treasurers; shops are full of potential superintendents; and though some of the candidates may be, by a certain margin of difference, inferior to

the men now occupying the higher places, the fact of their presence places a definite check on the salaries that are paid. Experience in work of the higher sort would reduce the difference in quality between the men in the better positions and the candidates for them. The tried man has the preference; but his tenure of office depends in a measure on his success in what may be termed a continuous competitive examination. There are complications arising from the fact that personal relations to capitalists are not without a large influence on the awarding of the prizes in this contest; but available candidates are always numerous enough to place a definite limit beyond which the wages of directive labor may not rise. This element of an employer's returns is determined by active competition in a general market for labor of a certain intrinsic quality.

There remains to be determined the amount of pure mercantile profit. This is the final element in the analysis of the gross returns of business, and if there are principles governing it, then the division of social wealth is at least a scientific process. Pure profit is the seemingly uncertain quantity which lures men into business, and which figures in the minds of the discontented as the prize of agitation. Here, if anywhere, lies the spring that fills the pools of unearned wealth.

Pure profit is a vanishing sum. The *a priori* laws of political economy demand the annihilation of it, and it submits to the decree. In the Ricardian sense of the term the natural amount of this ultimate profit is *nil*. It is a positive quantity where the competitive law has not fully asserted itself, and where, within the sphere of its control, it is checked by temporary influences. Economic orthodoxy concedes to this element no theoretical existence; and where the assumptions of this system concerning competition are realized, the practice of the world becomes orthodox; pure profit actually disappears. This is an unanticipated vindication of logic. Ricardo did not predict such an outcome, nor did he so far analyze the returns of industry as to distinguish the element that is subject to the law of annihilation. Yet his system involved the principle, and the conformity to it of actual practice is the latter-day triumph of Ricardianism.

With capital seeking investment at the prevalent rate of interest, with directive labor seeking employment at the high rate of wages that its quality demands, can they fail to find each other out, if by union they can each secure a premium? Can anything prevent them from simultaneously migrating to the point where, besides their wages and interest, they can command an ulterior gain? Nothing can do so in theory. Ordinary risk is not a barrier, since that is counterbalanced by the item of insurance which in our analysis we have recognized. Economic formulas call for a prompt migration of labor and capital to the point of special inducement; and the formulas are justified. A subject of common remark is the reckless promptness with which the movement actually takes place. An employer who is getting more than interest and wages of direction is interested to enlarge his product by drawing on the loan fund of the market; and a capitalist who by engaging in industry can secure more than interest and wages of direction, is interested to create a new establishment by drawing on the market for directive labor. By enlargements from within and accessions from without the productive plant is enlarged, the product increased and the price of it reduced to the point at which capital and labor of every kind receive only their normal reward. The point of stable equilibrium is that at which a capitalist-employer realizes neither more nor less than interest on his capital and a salary for his time.

Stable equilibrium is not usually rest. Influences may disturb the adjustment, and in this instance they do so as regularly as it is effected. It is not to be anticipated that the myriad of different industries that occupy the economic field will ever simultaneously reach their natural level of productiveness. Pure profits will always be found at numerous points, though at no one of them will they prove permanent. If we continue to watch a particular industry we shall see pure profit appearing, as the result of a disturbing influence, and then slowly vanishing, as competition reasserts its control. If we watch the entire industrial field we shall see pure profit appearing, now here and now there, shifting forever its place in the field, but never absent from it.

One influence which periodically raises the returns of business above their natural limit is the rhythmical movement of trade, or the fluctuation from under-consumption to over-consumption that results from internal changes in the economic system. The period of active demand yields profits where, other conditions remaining the same, that of slackened demand entails losses. The two results should be made to offset each other by averaging the returns of a considerable number of years, if the true status of an industry is to be ascertained. When, in a long interval, the pure profits just balance the losses the natural rate of returns may be considered as maintained.

The settlement of a fertile continent is a disturbing influence that may extend through a hundred years, and this period must then be regarded as a prolonged interval of adjustment. Competitive law cannot fully vindicate itself while soil exploitation — not agriculture — is pouring treasures into every one's lap. Yet in the end the slow moving law will assert its power. The opening of America to settlement created an originally high level of general profits, from which level competition has reduced them with varying rates of rapidity. Some localities and some industries still realize abnormal gains from this source.

There is another disturbing influence which gives a promise of constantly recurring as long as the economic system continues. It acts intermittently, and on particular industries, but is always present at a thousand different points in the general field. It is the legitimate creator of pure mercantile profit; and though we call its action a disturbance, since it counteracts the action of competitive law, yet this influence is as natural as the force that it abrogates. It affords a guaranty for continued civilization. It is the result of a unique human service, that is the most far-reaching in its effects of any that an industrial worker can render. This is the making and applying of inventions. While the rest of humanity are working, an elect few are searching. The results of their search come partially and temporarily to themselves; the major rewards diffuse themselves among the members of society as a whole, who in the end absorb the total gain. The natural rewards of invention

are the most economical and effective of all possible modes of ensuring the advance of material civilization. They come in a form adapted to secure a maximum result with a minimum of expense to the beneficiaries. They are not stipends, but prizes; and their effect is to enlist the services of scores of men where only one can receive a personal return.

Invention may give to an establishment a temporary monopoly of a new process or a new product, and raise profit for the time being above the natural level. The making of such discoveries is not a part of the routine work of a manager. It does not fall within the scope of any function for which a salary is paid. Some Yankee ingenuity, some power of adapting mechanical means to ends is indeed required in a successful superintendent. The exercise of it in minor ways lies within the routine of his business. But the inventions that we are now considering are those that materially change that routine. If a salaried manager makes such an invention, it is extra-official work, and entitles him to the same reward that would accrue to any other inventor.

The relations between the makers of inventions and those who introduce them are an interesting subject of study; and so are the effects which the introduction of them has on establishments that continue to use the older methods. It is not, however, desirable to obscure our main propositions by too many corollaries. The device that effects an important economy must, in the end, force itself into general use, and thus end the advantage which prior possession gives to its originators. Patents expire, and secrets become known. The public gets a part of the benefit from the first introduction of an economical process, and gets the whole benefit in the end. Competition restores the natural rate of profit, and leaves, as a permanent result, an increase of productive power, an elevation of the level of human life. Patent laws are an evidence that the personal rewards to be gained by this service are too small, rather than too large, and that it is the aim of the state to prolong the fruits of invention beyond the limit of time during which, by natural law, the inventor could enjoy them.

If the theory here advanced is true, an inquiry into the business profits realized in this country during the past few years should show that some industries are, and others are not, approaching the condition in which only natural profits are afforded. Statistics that group several branches of manufacturing and state returns in the aggregate may be expected to show a profit somewhat above the natural rate; and figures for the country at large must certainly do so. The general rate of profit in the United States is high, not only because of gains realized by many inventions, but because of returns still realized by the quick exploitation of natural resources. Statistics taken a few years hence would probably eliminate much of this latter variation. The profits from invention would remain, and the returns of any considerable group of industries must be expected to show a permanent average profit somewhat above the natural limit.

On the other hand, the returns of particular branches of industry would show, in many cases, a close approximation to the limit. Figures taken in a single case would show the stage of development that one industry has reached; they would show whether it is still enjoying a residuum of originally high profit, or whether the competitive pressure has reduced its gains to the rate that can be permanently maintained.

It will be seen that the facts that we need in order to fully verify our theory are not at present to be had. Fortunately, however, the facts that are most useful are those that relate, in each case, to one specific department of business; and here the knowledge which each employer in that department possesses is of more than ordinary scientific value. For many purposes aggregates and averages taken from many branches of production are necessary; and these the business man cannot furnish. For our present purpose averages are misleading, and the returns of different departments taken each by itself, give the testimony that we desire. It is not difficult to obtain facts of this kind which strikingly illustrate the tendency of recent influences to crowd profits to a point that affords nothing beyond interest and the wages of management.

The returns of the textile industries of New England, as shown in the report of the Boston stock market, reveal the fact that a few members of this extensive group have, during the fifteen years preceding 1886, enjoyed a certain immunity from the full effects of competitive law. The returns of the group as a whole have, during that interval, been strikingly near to the point of natural profit. The same appears to be true of the shoe and leather industries. The iron and steel manufactures and the numerous branches affiliated with them compose a group so extensive that its average profits would be unavailable for our purpose. Though such gains as those which patents secured to the screw-making industry may now be rare, there are departments enough in which competition is held in temporary abeyance to cause considerable deviation from the theoretical standard. Yet within this general group may be found numerous cases in which the law is verified; and the same is true in other parts of the manufacturing field.

Public transportation is a department of production essentially peculiar. The local traffic of railroads enjoys a certain immunity from the full effects of competition. This source of variation from theoretical standards is apparently counterbalanced by influences of an opposite character, and the railroads of the United States show an approximation to the normal rate of profits that is even closer than that of the textile industries. More and better statistics than are now available are certain soon to be collected; and there is no risk in affirming that where the prescribed conditions exist, the normal rate of profits will be realized. Labor of every sort will be paid for; capital will be rewarded; but there will be no bonus for any one.[1]

We are living in a half-developed system, and in the law of its growth may discern more clearly than was formerly possible an outline of the form that it will ultimately take. That law connects the rewards of business life with services, and gauges them in amount by the value of those services. It gives more

[1] I am indebted to the Hon. Joseph H. Walker, of Worcester, Mass., for statistics tending to show that, in manufacturing industries, profits in excess of the natural rate, when they are not secured by inventions, have of late been rapidly disappearing.

to intellect than to muscle, and more to character than to either; the largest stipends that it offers are for fidelity to trusts. It checks undue discrimination in favor of mere position, and ensures to the men in the industrial ranks rates of pay not too far below those enjoyed by their leaders. It offers special prizes for the discovery of secrets of effective work. It limits more closely than statute law could do the personal benefits that accrue to the men who render this service, so that when the law is invoked it is for the purpose of increasing them. By organization and discovery it constantly places humanity upon new vantage ground in the struggle for well-being. Less and less, measured in effort, is becoming the cost of a day's enjoyments; greater and greater, measured in enjoyments, are the returns of a day's labor. In cheapened production, which is never appreciated, and is often blindly resisted, lies, according to this social law, the chief hope for modern workers. The leaders and discoverers whose labor ensures this constant gain find their rewards limited in amount and in time, while the wealth that they diffuse throughout society is, in both directions, limitless. The outline of the coming industrial state has the shape neither of despotism nor of democracy; it is the outline of a true republic.

JOHN B. CLARK.

THE NATURAL RATE OF WAGES.

IN his chapter on "Popular Remedies for Low Wages" John Stuart Mill described a certain "considerable body of existing opinion on the subject." The opinion here referred to was not critical opinion merely, it was also opinion as an active force. Taking form in legislation, or, less coercively, in moral influence, it undertook to provide that the workman should have "reasonable" or "sufficient" wages. That is, it was exerted to maintain wages "above the point to which they would be brought by competition."

As in Mr. Mill's time, so now, there are two sets of forces operating with reference to the rate of wages. One set is composed of the forces of competition. Their action is automatic. Their resultant is a mechanical equilibrium. The other forces are self-conscious forms of human feeling and opinion. They set up a standard of justice, and take form in moral judgments, appeals to reason, the policy of labor organizations, legislation, and administration. Whatever their efficacy for good or ill, the self-conscious forces are acquiring an increasing prominence.

In regard to these two kinds of forces that make, or are supposed to make, the rate of wages, we may discover three different views among economic thinkers.

By economists of severely deductive habits and somewhat reactionary tendencies, the self-conscious forces are dismissed as of no importance except as a disturbing element. They are regarded as impotent to affect the rate of wages in the long run. Competition is held to be the only agency that needs to be considered, because, sooner or later, the rate of wages will be made inexorably, in the outworking of an automatic natural process.

Another class of thinkers, if we may call them such, deniers of natural law in the social world, reach the opposite conclusion. Competition they regard as a kind of human conduct that can be checked and presently made end of, like crime or intemper-

ance. The self-conscious social efforts are believed to be quite sufficient, if fully put forth, to make the rate of wages, so far as the making is an affair of distributing a certain total product among the parties engaged in its production.

According to a third and middle view, the self-conscious forces sustain some relation to the physical and automatic forces by way of limitation and supplement. Just what this relation is, is a fact for scientific investigation to determine.

In science, as in practical affairs, the mean hypothesis is often more promising than either extreme, and it certainly is so in the highly complex sciences of social phenomena. Assuming then, provisionally, that the rate of wages is the resultant of competitive and moral forces acting simultaneously, the true wages problem, as it presents itself to the economist to-day, is to resolve this resultant, and ascertain whether it lies mainly within the projection of the competitive, or mainly within the projection of the moral forces.

I.

We may conveniently begin the study of this problem by examining the standards of ideal, or just, wages, that are set up, and attempting to decide what, if any, is their common and valid content. We may then study the competitive process as it goes on in the absence of consciously imposed restrictions and ascertain how nearly the results approximate to the ideal. Lastly, we may inquire whether the application of the self-conscious forces serves, or can serve, to make the approximation more complete.

We are so accustomed to make a sharp distinction between the communistic and the individualistic ideals of society that it may seem absurd to affirm that, within rather broad limits, there is no absolute contradiction between the communistic rule: "From each according to his abilities, to each according to his needs," and the individualistic rule: "To each according to the value of his work." But if we go back to organic principles we shall soon discover that, as a general and average fact, the one

rule cannot mean anything else than the other, and that, so far as the two do not coincide they correct each other. Taking the phenomena of life as a whole, there is, and must be, an equivalence between needs and work, and an equivalence between the satisfaction of needs and the existence of abilities to work. Needs are, in general, but the requirements of certain things to replace the tissue consumed in physical and mental efforts, or to build up and develop tissue for greater future efforts. These efforts, adjusted to useful ends, are work, and apart from work, therefore, there are no genuine needs. Excepting the needs of childhood, old age and misfortune — exceptions more nominal than real — desires or requirements for other ends than those of useful service for self or others are pseudo-needs, illegitimate in economy as in ethics. The satisfaction of needs is not limited, however, to the mere restitution of an exact equivalent of human energy already expended. To some extent it anticipates work to be done. Nature makes generous advances to her children, but inexorably enforces payment.[1] A given amount of food contains more energy, usually, to be set free through its consumption, than was expended in obtaining it. Consequently, the value of work is usually a little more than the value of the antecedent work from which it was evolved. To these advances persistently utilized — advances converted into abilities, abilities in turn put forth in work — the progress of mankind from savagery to civilization has been due.

Occasional and individual misadjustments between needs and work are sure to occur, because social changes make misadjustments of every possible kind. It is in order then to inquire how the misadjustment comes about, and what is its true correction. It may be that men whose needs have been and are fully supplied are not converting their supplies into an equivalent of useful work, or it may be that men who are willing to work and have the will to develop their abilities beyond present

[1] Professor Sumner's assertion: "Whenever nature yields to man an atom which he has not earned, or advances it one second of time before he has earned it, we may all turn socialists and utopists" (Collected Essays in Political and Social Science, p. 50), contradicts the truth of both biology and history.

limits are inadequately supplied with what they need. Obviously the remedy in the one case is to bring educational disciplines to bear; in the other to correct, as far as possible, errors in distribution. The correction belongs for the most part within the sphere of moral effort, education, and philanthropy. It belongs to economic effort so far as the value of the laborer's work falls below the amount that will both recompense him for energy expended, and afford him something for the development of his potential abilities; for this is its natural value, the value nature commonly gives it. The rule of ideal distribution is, to each according to the full natural value of his work.

II.

Such being the ideal, how far does the competitive process tend to make it actual? What is the rate of wages in the absence of self-conscious agencies acting in other than competitive ways?

English political economy has always more or less distinctly affirmed that in any society there is a certain natural rate of wages. The first description of natural wages was strikingly different from the definition that soon after gained acceptance. It was Adam Smith's saying, — the first sentence in his discussion of wages, — that "the produce of labor constitutes the natural recompense or wages of labor," and was made in view of "that original state of things" when there was neither landlord nor master, and the whole produce of industry belonged to the laborer. The truth, so fundamental in our modern philosophy of wages, that in a later industrial state also — when the active population has been differentiated into various classes of employers and employed — the wages of the laborer are still approximately equivalent to what he produces, is not worked out in *The Wealth of Nations*. If Adam Smith ever distinctly perceived that the employer's profit is value created by his own services, not by the laborer's exertions, the idea was no link in the chain of thought that took shape in the chapter on wages. Consequently, in treating of

labor as conditioned by landlord and master, his thought gravitates to the minimum limit to which wages can be forced by competition. "There is, however," he says, "a certain rate below which it seems impossible to reduce, for any considerable time, the ordinary wages even of the lowest species of labor." This rate is the wage that will maintain the laborer, and enable him to rear another laborer to take his place in the next generation. If the wealth of a country were stationary, the competition of the laborers and the interest of the masters would soon reduce wages to this lowest rate which is consistent with common humanity. If wealth is increasing, and so long as it continues to increase, wages will be above the minimum. If wealth were decreasing, wages would fall below the lowest humane rate until, by famine, "the number of inhabitants in the country was reduced to what could easily be maintained by the revenue and stock which remained in it."[1]

This analysis was seized upon by Ricardo, who condensed it into a definition. Giving a new, and, as it proved, permanent meaning to the term "natural" which Adam Smith had used in a sense so different, Ricardo defined natural wages as "that price which is necessary to enable the laborers, one with another, to subsist and to perpetuate their race without either increase or diminution."[2] To its author this definition meant a great deal more than the words explicitly affirm. Saying nothing of Ricardo's analysis of minimum wages in terms of food, which we need not follow, it is plain that the limit below which he supposed wages could not permanently fall is considerably above the minimum described by Adam Smith. He assumed that the laborer was master of the minimum rate below which wages could not be permanently lowered. "It is not to be understood," he said, "that the natural price of labor, estimated even in food and necessaries, is absolutely fixed and constant. It varies at different times in the same country, and very materially differs in different countries. It essentially depends on the habits and customs of the people." It is safe to say that

[1] The Wealth of Nations, chapter viii.

[2] Principles of Political Economy and Taxation, chapter v.

if this last assumption of Ricardo's had been warranted by the facts of the actual industrial world, English political economy would have escaped the wrath of humanitarians and the name of a dismal science. But when John Stuart Mill restated and elaborated the body of doctrine evolved by his predecessors, he was not long in proving that the moral minimum of wages was a myth. Any disadvantageous change in the circumstances of laborers, — that is, any reduction of actual below natural wages, — he pointed out, "may permanently lower the standard of living of the class in case their previous habits in respect of population prove stronger than their previous habits in respect of comfort. In that case the injury done will be permanent, and their deteriorated condition will become a new minimum tending to perpetuate itself as the more ample minimum did before;"[1] and this has happened and does happen so frequently as to render all propositions ascribing a self-repairing quality to the calamities which befall the laboring classes, practically of no validity.

III.

Yet it does not follow that there is not a true natural rate of wages, well above the limit at which a man must starve or beg. There is a soul of truth in Ricardo's idea, and it happens to be the only part of the doctrine that the economist, as such, is really concerned with. Far above the limit of mere subsistence there is a limit below which the permanent reduction of wages is uneconomical. The maximum production of wealth depends on the most complete and perfect division of labor, and the division of labor depends not only on the extent of the market but on the size of the population. The extent of the market itself depends on the size of the producing and consuming population, and an occupation can become differentiated from allied occupations and developed into a distinct trade, business, or profession, only when there is a considerable number of persons to engage in it. There is, therefore, a limit below which the reduction of the laboring population reduces the incomes not

[1] Principles of Political Economy, book ii, chapter xi.

only of laborers themselves but of all classes in the community. The farmer cannot develop the resources of his land, or the manufacturer increase his product. The reward of management is curtailed and interest reduced. Again, there is for each laborer a maximum efficiency in proportion to his consumption. Up to a certain point the more real wages put into him the more useful service can be gotten out of him. To quote once more from Adam Smith, the industrial experience of a century has been but cumulative proof of his saying: "A plentiful subsistence increases the bodily strength of the laborer, and the comfortable hope of bettering his condition and of ending his days in ease and plenty animates him to exert that strength to the utmost."[1] As statistical science and methods improve, it should be possible to ascertain the economical rate of wages for any given occupation at any given time, and with a fair approximation to accuracy, by means of statistical averages drawn from selected results. These would include statistics of the cost of labor of the same nationality, employed under substantially similar conditions except differences of real wages.

Now this economical rate is none other than the ethical rate. To give the laborer the wage that calls out his full efficiency and affords him a comfortable hope for old age, is to give him no less than that sum which is sufficient to develop his potential abilities. In communities accustomed to change and progress, the actual rate of wages must equal this ethical and economical rate, or fall very much below it. Where the ideas and aspirations of the successful are communicated to all classes the laborer can never remain in an equilibrium of contentment. The stimulus and tone of his life is the prospect of doing better. Remove that stimulus and he does not simply remain a stationary economic quantity, he deteriorates from that moment. His efficiency is impaired, he adds less and less to the world's sum total of wealth. Losing the ambition to do as well as he can, he loses also the ambition to live as well as he can, to make the most of what he has. He falls into unsanitary habits. His vitality and that of his children is impaired, and, while he may

[1] The Wealth of Nations, chapter viii.

have as many children as he would have if living in wholesome prosperity, not as many of them will survive to maturity. Both in efficiency and in numbers the labor force is diminished, and the total production of society is lessened. Consequently, in a community advancing in wealth and refinement, that cannot be an economical rate of wages which is insufficient to enable the workingman to share in the general expansion of life.

Giving to the laborer the full natural value of his work, the economical rate of wages is no less than the produce of his labor. The economical rate, moreover, is the rate to which wages actually would conform if competition were governed only by the expectation of gain, and the losses of excessive competition could not be shifted by the competitors upon others. Competition carried to the extent of keeping wages as low as this rate is beneficial to all. It forces men to make the most of their opportunities, it sharpens thought and disciplines character, and calls the creative powers into fullest action. Carried the least degree farther, competition merely deadens and destroys, and the majority of men do not habitually carry competition to destructive lengths when acting freely by the impulse of natural motives. The economic limit of competition is its natural limit — not always its actual limit — and the rate of wages made by competition restricted within this limit is a natural rate.

Therefore, in the fullest sense, the economical rate is at once the true natural and the true ethical rate of wages. Stripped of fallacy and rightly developed, the Ricardian doctrine of natural wages is identical with the earlier affirmation of Adam Smith. The natural remuneration of the laborer is the produce of his labor, and in an improving society this produce is not less than the "reasonable" and "sufficient" wages which humanitarian feeling demands.

IV.

Let us now inquire to what extent the actual rate of wages, so far as competition determines it, tends to conform to the natural rate.

The wages-fund doctrine has been finally overthrown, and it has been abundantly demonstrated that the actual rate of wages is made by the productiveness of industry; but the proposition has not been reduced to perfect definiteness. That is to say, it is no longer disputed that wages are more when product is more and less when product is less, but there is still dispute whether increasing production tends to benefit chiefly the employer or chiefly the laborer. The decisive answer to this question will be given some day by statistics. Meanwhile we can satisfy ourselves on two important points.

The formula of Cobden that wages rise when two bosses are after one man and fall when two men are after one boss, means that every increase in the number of employers who can make a sufficient profit from their business to maintain themselves as employers, acts favorably on the rate of wages. And this is true, notwithstanding the fact that consolidations of productive undertakings, concentrating them in the hands of the most competent men, are attended with economy of production. So long as new employers can find a place in any industry, and profitably maintain themselves in it, the benefits arising from concentration have not yet been distributed in wages and reduced prices of utilities. The profits of the employers hitherto in the field have been abnormally large. It is not the intrusion of poorer employers into the field that increases the profits of abler employers, any more than it is the actual resort to poorer land that increases the rent of better land. It is the increasing value of the produce of the best land, due to its failure to supply an increasing demand upon it, that makes the profitable cultivation of poorer land possible and affords rent to the best. The actual cultivation of the worst land that can be cultivated with profit establishes a limit beyond which the value of the produce of the best land cannot rise. But for the produce of poor land the owners of fertile land could obtain famine prices.[1] So of employers. If there is any condition necessitating a resort to poorer employers it is the failure of the best

[1] Malthus understood, or at least stated, the cause of rent more accurately than Ricardo. *Cf.* James Bonar, Malthus and his Work.

employers to supply the demand for employer functions. The number of men of superlative business genius is small, and the powers of the ablest men are not unlimited. If there were no resort to a commoner grade of talent the value of the employer function would rise above any assignable price. So far from deducting in any way from the laborer's real wages, the multiplication of employers who can sustain themselves above bankruptcy reduces the prices of goods and increases the wages of labor.

Does a condition of improving industry tend to multiply employers? The true answer to this question is that the number of employers tends to multiply just as far as the more gifted employers, or combinations of gifted employers, fail to discharge the employer function with decreasing cost to the community, thereby leaving for real wages an increasing portion of the total product of industry. This law is absolute. That combinations economize production we know. It is one of the most striking phenomena of modern industrial life. It is as if the owners of superior lands should discover some means by which increasing investments of capital in agriculture should yield increasing, instead of diminishing, returns. They could then drive the cultivators of the poorer lands out of the market if they chose, but only by dividing their increasing gains with consumers. Should they attempt to retain all, the humbler cultivators would again meet them in the market. It is the same with employers. Centralization of the employer function and the extinction of the smaller employers is possible only by conveying to the laborer a larger share of product than he previously enjoyed. There is, indeed, a limit in every industry beyond which the intrusion of new competitors will ensure the bankruptcy of some; and when that limit is reached the stronger survivors endeavor, by a judicious policy as to prices, to hold the field. But there remains the limitless domain of new utilities, and the specialization of utilities depends not only on that geographical extension of the market which Adam Smith described, but even more, under modern conditions, on the productiveness of industry, the greater or lesser incomes of

the people. When a man's income is increasing he does not increase all his expenses in proportion; he adds some new ones outright, purchases some utilities that he did not enjoy before. When his income is decreasing he lops off some at a stroke.

From all this it would appear that in communities enjoying increasing prosperity the actual rate of wages must tend constantly to conform to that true natural rate which is at once the economical and the ethical rate. That this is, indeed, the real tendency in the industrial nations at the present time, there is much reason to believe; but there are, unfortunately, many exceptions extending over large areas of population and through long intervals of time. To conform to the natural rate would be the real tendency everywhere and always, if competition were always uniform and normal. But in the actual industrial world competition is never uniform, and because not uniform it is often carried to ruinous excess.

V.

I have elsewhere shown that the competitive process, judged by economic or ethical standards, is inherently defective,[1] and this because, like all natural processes, it assumes a rhythmical form. "Competition begins only after gains in excess of normal profits have accrued to employing producers. As a consequence of this fact, when competition does begin it goes to excess." When, passing the normal limit, competition assumes that terrible intensity that presages business ruin, the employer is driven to every expedient to save some part of his narrowing margin of profit. The readiest expedient, the most available for the moment, though costliest in the end, is the exploitation of wages. In a mild way this is done by tacitly or openly restricting competition in the purchase of labor. Whatever brings additional employers into productive enterprise and intensifies competition in the sale of products will naturally intensify competition in the purchase of labor; but we must be careful not to confound the two processes. To some extent it

[1] The Theory of Profit Sharing, *Quarterly Journal of Economics*, April, 1887.

is easily possible for employers to separate them in their industrial practice, thereby adding to their profits a sum that would otherwise be added to wages. In its worst and most brutal form the exploitation of wages becomes a positive extortion from working men and women who have been reduced by misfortune to such straits that all power of resistance is gone. It becomes the "sweating" system of the clothing trades, the "plucking" system of the coal districts. Between these extremes are all those gradations that substitute the labor of women for the labor of men, the labor of children for the labor of women, and replace the native laborer with a foreign competitor of a lower grade of life. All these exploitations, reducing wages below the true economical rate, react disastrously on production, in time, and are contrary to the interests of employers as a class; but they profit for a while, and may continuously profit the individual employer who can shift upon society or his competitors the losses that his practice creates. He divides his ill-gotten gains with the consumer, and thereby, commanding the market, compels worthier competitors to adopt his methods.

Now to these deplorable results of ill-regulated competition there is no automatic correction, springing from motives of individual self-interest, that meets the case. The wide-spread belief that, if the exploitation of wages is carried so far as actually to enrich the employer, the sum so gained, if converted into capital, will return to labor, is still shared by many respectable economists. It is true to the extent that increasing capital does act favorably on wages. In overthrowing the wages-fund doctrine economists have somewhat lost sight of the real function performed by capital in employing labor. The owners of accumulating capital, casting about for productive investments, select, according to their best judgment, those that promise to yield the best returns. Labor for such new enterprises must be drawn, by the offer of increased wages, from other employments — to some extent even when there is a large body of unemployed workmen, since the unemployed are always the relatively inefficient. Even the replacement of old capital gives

rise to this process of selection among actual and possible enterprises with reference to their anticipated profitableness, and the consequent drafting of labor from the less profitable to the more profitable employments. The accumulation of new capital amplifies and accelerates it. Hence the ratio of capital to population, though having in its static aspect no such relation to wages as the old doctrines ascribed to it, has yet a dynamic relation that is definite and important. But when the capital has been wrung from labor, the original wrong is never righted. The capital has become the property of the employer, and has increased his power. The way in which it has been obtained has cultivated the disposition to acquire power in that way by continuing to exploit wages, even when industrial conditions no longer afford an excuse. The loss sustained by the laborer may never be repaired, for degradations of men and women are converted into organic changes. A lower type of life is the result, and ultimately the reaction is completed in a positive impairment of the productive force of the community.

Neither are the evil results of unequal competition corrected by efforts springing from altruistic motives, so long as these are not reinforced by associated action. The ultimate cure for industrial evils is, indeed, in the growth of altruistic feeling. Employers must cease to exploit wages, either to avoid loss or to increase their profit and power. They and others must endeavor, by personal help and encouragement, to counteract the tendency to degradation in the unfortunate and discouraged. But that these efforts on the part of those who have the disposition to make them may avail, a restraint must be put on those who have no such disposition. Unselfish men, acting as individuals, without reference to each other, would be crowded out in the struggle for survival. That ninety-nine fair employers may have a chance, there must be some restraint upon the hundredth unfair one; and that restraint can be effectively organized only by the interests injuriously affected. It must be their united resistance and co-operation.

VI.

So we are brought, at last, to consider the action of those self-conscious forms of feeling and opinion which undertake to govern the competitive process by such means as the policy of labor organizations and legislation. What can they accomplish?

It requires neither argument nor marshalling of facts to prove that by no means whatever can employers be forced to surrender from their gross profits, for addition to the wages of their employees, any part of the sum that constitutes the normal reward of the employer function. Any attempt, temporarily successful, to secure more, would simply drive employers out of business and throw labor out of employment. But when competition among the undertakers of enterprise is carried to its full normal limits there will be no ulterior profit in excess of such reward of the *entrepreneur* function as will maintain that function unimpaired. With capital accumulating for investment, the competition of producers as sellers of their products is sure to reach its full normal limits. The only sums, then, that can be added to wages by any means whatever are: First, the sum labor is in danger of losing, either (1) through the failure of employers to compete as freely as purchasers of labor as they compete as sellers of products, or (2) by that merciless competition which takes advantage of the laborer's ignorance or weakness to rob him and divides the plunder between the employing producer and the buyer of goods. Secondly, the sum that might be produced by calling into action any potential manhood and ability of the laborer that actual competition fails to develop. Can as much as this be accomplished?

The power of the labor organization is the strike, actual or in reserve, and back of the strike the ability of the organization to hold together. Unless there is some ulterior motive for permitting the strike, the employer can better afford to yield to the demand of labor any sum less than the amount the strike will cost him and not exceeding the aggregate of the sums above described as possible additions to wages. Let us designate this aggregate by d and the cost of the strike by c. Included in the

sum d will be a sum d' which, if d does not go to labor, cannot go to the employer. It is the sum wrested from labor by the illegitimate forms of competition and given to the consumer in an abnormal reduction of price, as for example in the case of the white underclothing made by sewing women. All that an employer can add to his own profit at the expense of labor is $d-d'$. If, now, the demand of labor over which a strike is threatened is for a sum exceeding d, the employer has no alternative but to resist until labor is starved into submission or the business is indefinitely suspended, since he may as well quit business entirely and accept a salary as to permanently surrender a part of the normal and equitable reward of his own services. Again, if there is a good prospect that labor can be brought to surrender before the cost of the strike c, plus d' (the sum conveyed by competition to the consumer) amounts to the sum d, it is the employer's policy to resist it for the sake of saving as an addition to his profit the remainder, $d-(c+d')$. If, on the other hand, labor can hold out until $c-d'$ equals d, the employer can better afford to surrender at once the entire sum d, unless there is an ulterior object to be gained by resistance.

Such an ulterior object, if it could be achieved, would be the discouragement of organized and concerted action by labor, and it could be achieved if the sum to be lost by labor in maintaining its organization was greater than the sum to be lost by permitting its disintegration or if the organization of labor limited and weakened itself by mistakes of policy. On the contrary, if labor must lose as much by disintegration as it can possibly lose in defending its organization, and if the amount that the employer can add to his own profits by breaking down the organization is small at the best in proportion to the sum that labor can gain by concerted action, employers will not follow a policy of warfare against labor organizations.

And these, it is easy to see, are the actual facts. The sum that labor has to gain is the sum d. The utmost that the employer can add to his profit is $d-d'$, the sum withheld from labor by unequal and illegitimate competition, less the sum conveyed by illegitimate competition to the consumer. And the

loss by labor of the sum *d* means, as we have seen, the progressive degradation of labor. If the loss is inevitable, workmen may as well lose by strikes as by competition with each other. They can afford to sacrifice in defence of organization all that it is possible for them to lose.

By organization, therefore, labor can secure the whole sum *d* when abnormal competition tends to convey it to employers and consumers, and the organization can be broken only by its own defects of constitution or mistakes of policy. The principles governing the coherence of the labor organization are the same as those governing the coherence of combinations of producers. It is essentially defensive, not aggressive. It is more or less coherent as it is more or less homogeneous in composition. It can only correct the results of imperfect competition and bring illegitimate competition within normal limits. If it attempts to secure more than the sum *d*, it curtails employment and sets up economic reactions against the whole wages class. And it must allow to its members the best wages they could severally make by their individual competition. Men will join and remain in labor organizations only if they can thereby secure better wages than they can secure by individual efforts. They will secede if their superior abilities are refused reward, or if mistaken policy reduces wages below the sum they could command as individuals and still be above the minimum at which resort to charity begins. The Knights of Labor in their earlier organization violated the law of homogeneity. In reorganizing on trade lines they are attempting to conform to it. Trade unions have traditionally made the mistake of refusing to allow to the best workmen the wages they could command as individuals.

We need not linger to prove that arbitration and legislation, so far as they have to do with wages, are subject to the same general limitations as the policy of labor organizations. They have to do only with securing to labor the sum *d*. They can add to wages only the sum that would be added by competition in the purchase of labor as perfect as the competition in selling products, and by restriction of competition in selling products to normal limits.

VII.

Must we not therefore conclude that the rate of wages is made mainly by the competitive forces, and that the moral forces, acting through organization and public opinion, are powerful to correct the distributive errors caused by the inherent defectiveness of the competitive process, but that, beyond such corrective work, they are unavailing? Apparently we must, if we consider the direct process only. But beyond the direct, immediate process, is an indirect process in which moral forces have a larger sweep. We have seen that on the productiveness of industry depends not only the absolute amount of the laborer's remuneration, but also its relative amount, the proportion it bears to the whole product. And that the productiveness of industry is conditioned by the moral quality of the people is no new truth of either political economy or practical wisdom. Whatever personal or associated effort, education or legislation, can do to develop the physical vigor and moral powers of workingmen, will amplify the product of their labor and increase their incomes. It will narrow somewhat the gulf between the abilities and incomes of the few and those of the many. The function of the man of business is essentially that of co-ordinating the factors and processes of the economic world — labor, capital, invention, and superintendence in the factory, supply and demand in the market. Throughout organic nature, and no less in human society, the co-ordinating function is useful and costly compared with the mere expenditure of energy in direct and simple ways. If the many are to share in the great rewards now enjoyed by the few, they must become competent to assist in discharging the functions now discharged by the few. This thought suggests another, that, perhaps in a much more direct way than has been supposed, the more serious economic disturbances of modern times, those industrial depressions that follow the enormous displacements of capital and labor which invention and discovery are continually making, are aggravated or mitigated by the intellectual and moral qualities of the people. For on what else does the utilization of such changes with least

loss depend, than on the ability of the people to make quickly and easily the necessary readjustments? This is a large and perhaps a fruitful subject, on which we cannot enter at this time. It is sufficient to know that, if not in the way contemplated by Ricardo, yet in a way immeasurably more important, the rate of wages depends on "the habits and customs of the people": above all on the habit of "acting upon each other not as the forces of inorganic nature work, in blind impact and resistance, but rather as the forces of organic life, assimilatively — each finding his ends in the ends of the others, and all working in and through the others for the development of one organic social whole, in which each individual is at once the means and the end of all the rest."[1] The growth of this habit will continually raise the natural rate of wages — the rate below which reductions are wasteful and immoral. The competition that forces actual wages down to that natural rate — to the rate, that is, that rewards a man according to the use he makes of the powers with which he is endowed, affording him the means to develop them, but not to idle them away — also tends, no less certainly, to raise the natural rate, for it stimulates effort and quickens thought. It is the chief cause of intellectual progress and systematic endeavor. Legislation, arbitration and efforts of organizations, so far as they correct the tendency of competition to reduce actual below natural wages, play their part also in raising the natural rate. Carried the least degree farther, they but interfere with the normal action of other forces, and thereby retard progress.

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[1] Daniel Greenleaf Thompson, The Problem of Evil, p. 280.

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